PRINCIPLES OF NATIONAL ECONOMY

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PRINCIPLES OF NATIONAL ECONOMY

BY

THOMAS NIXON CARVER

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INTRODUCTION

This book is frankly written from the national point of view. Someone has suggested that much futile discussion would be prevented if everyone were required to point at the thing of which he was talking. It would be a wise rule if no one would ever speak or write about "society," or "the community" in general, but only of such groups as can be named and located. The United States of America is such a group. So also are England, France, Canada, and a number of others. These and similar groups are the largest that are capable of carrying through definite economic policies.

Not only is this book written from the national point of view; it is frankly a theory of national prosperity. In this respect the author has the illustrious example of the great Adam Smith, whose work was entitled "An Enquiry into the Nature and Causes of the Wealth of Nations." Prosperity is assumed to be desirable and worthy of the highest efforts of the scholar in economics as well as the statesman. It is believed to require not only an ample production but also a fair distribution of the products among all classes, to the end that all may share in the national prosperity.

The writer may be accused of bringing purely ethical considerations into an economic discussion. He has no desire to repudiate the charge, certainly not on the ground that ethical considerations are unworthy of an economist. The charge, however, does not happen to be correct, unless a preference for national prosperity as against national poverty can justly be called an ethical preference. The author pleads guilty to this preference, and the book is written as an expression of it. Having this preference, the author frankly argues for those

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habits, policies, and institutions which are most likely to contribute to national prosperity. Assuming that others have the same preference, the language used may sometimes be that of a propagandist, and the reader may even be exhorted to behave in such ways, or to support such policies and institutions as will contribute to the end which all are assumed to desire. These exhortations, however, are based wholly on reasoning as to the probable effect on national prosperity of the habits, policies, and institutions under discussion, and never on sentimental views of morality.

Let it be understood, therefore, that this book is written for those who are interested in the problem of national prosperity and who believe that this should be the aim of all good citizenship. It is also written for those who are not too squeamish to consider moral questions whenever they can be shown to have a definite connection with the central problem of national prosperity. Finally it is written for the studiously inclined and not for those who merely wish to find support for their prejudices.

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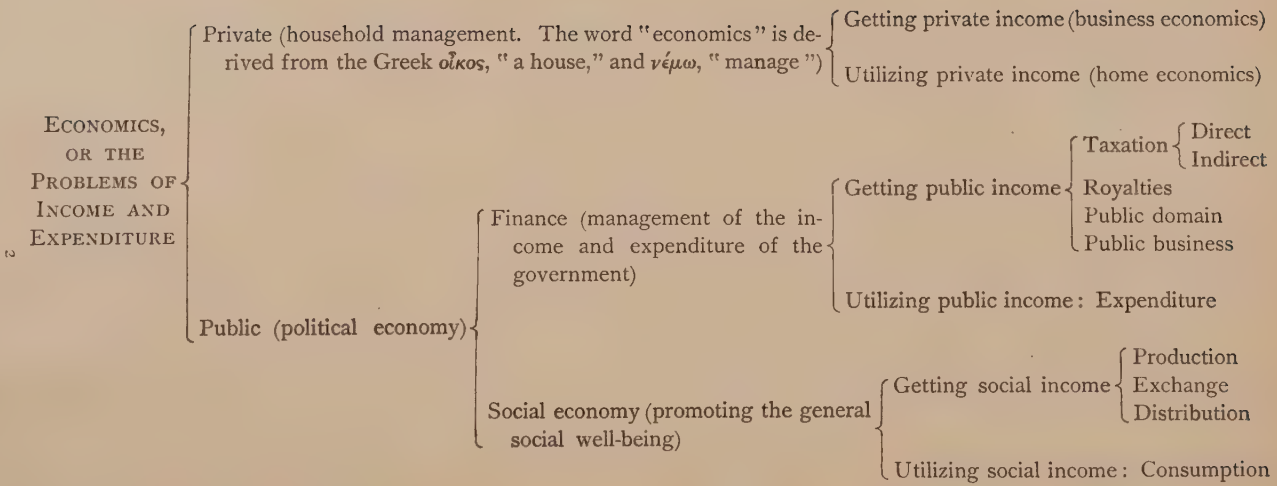
PRINCIPLES OF NATIONAL ECONOMY

PART I. THE FACTORS OF NATIONAL PROSPERITY


Economics, or the Problems of Income and Expenditure
Private (household management. The word "economics" is derived from the Greek οἶκος, "a house," and νέμω, "manage")
Getting private income (business economics)
Utilizing private income (home economics)
Public (political economy)
Finance (management of the income and expenditure of the government)
Getting public income
Taxation
Direct
Indirect
Royalties
Public domain
Public business
Utilizing public income: Expenditure
Social economy (promoting the general social well-being)
Getting social income
Production
Exchange
Distribution
Utilizing social income: Consumption

CHAPTER I

WHAT MAKES A NATION PROSPEROUS

Why the study of economics is important. Economics would have little interest for the serious student if it did not throw light upon the conditions of national prosperity and the methods of promoting it. National prosperity is generally understood to depend largely, if not mainly, upon business in its widest sense. The student is sometimes tempted, therefore, to begin the study of economics with an examination of the peculiarities of some of the large business establishments and business methods of the present day. These, however, are highly complex affairs, besides being the result of a long process of development from simpler beginnings. There is also a temptation to begin with a historical study of these simpler beginnings, but, because of lack of evidence, it is much harder to find out what business was like a few centuries ago than to find out what it is like today. The way to begin the study of economics is to analyze the business of getting a living and reduce it to its simplest elements. In this way we shall find what elements all business—large and small, primitive and modern—have in common before undertaking the study of the special peculiarities of different kinds of business.

The primary purpose of the business man, as well as of all those who work with or for him, and others who work independently, is to increase his own prosperity. Under a properly organized industrial system, however, no one can increase his own prosperity except by some method that tends also to increase the prosperity of the whole nation. If there is a single case where this is not true (that is, if there is a case in which anyone can prosper by any method or practice that does not

add or tend to add something to the prosperity of the whole country) there is an obvious defect in the laws or the organization of industry. This defect must be corrected if the nation is to attain its highest prosperity. The more such defects there are, the less the nation can prosper; and the fewer there are, the more it can prosper. Before we are in a position to correct such defects or even to know whether they exist or not we must have a pretty clear understanding of the conditions of national prosperity and the things which promote or hinder it.

Ways of getting wealth. The prosperity of a nation, like that of an individual, depends, in the most general sense, upon how many useful things and services it can manage to get. To have little and be satisfied with little may bring contentment, and contentment may be as desirable as riches or wealth, but it is not riches nor wealth. A peaceful nation may get those things that are called wealth (1) by finding and appropriating them, (2) by making or producing them, or (3) it may get them from other nations in peaceful and voluntary exchange, provided it can find or produce within its own borders things that can be given in exchange.

How many useful things it may find within its own borders will depend partly upon how rich its land is in what are called natural resources—such as soil, minerals, forests, water power, grass, and a multitude of other things—and partly upon how active and intelligent its people are in searching for these things. How many useful things it can make will depend mainly upon how active, intelligent, and skillful its people are in all the arts of production and how thrifty and enterprising they are in designing, buying, and utilizing tools and other instruments of production. How many things it can get from other nations will depend primarily upon how many things it can find and produce to give in exchange, how favorably it is situated geographically for carrying on trade with other nations, and partly also upon how wise and enterprising its people are in learning the needs and desires of other nations and in adopting sound methods of carrying on international exchanges.

The problem of national prosperity is, however, by no means so simple as it may seem from this general way of stating it. It is infinitely complicated, so much so that when the student begins to study it he is in danger of being bewildered by a vast number of details. There are certain general principles which help to avoid this bewilderment. It is necessary, therefore, to begin at the beginning and study some of these principles.

Economy. It is generally understood that economy has something to do with prosperity; but what is economy, and what does it mean to economize? In its original sense to economize meant to manage a household. The word "economics" is derived from two Greek words, *οἶκος*, "a house," and *νέμω*, "manage." Nowadays the study of the management of a national household is not inappropriately called national economy or, more generally, political economy. Its purpose is to find the answer to the question at the head of this chapter—What makes a nation prosperous? It appears, therefore, that the words "economy," "economics," and "economize," as they are understood today, have a wider meaning than the management of a private household.

What it means to economize. In its simplest sense to economize is to choose among several different things which one would like to have, giving up the things for which one cares less in order to have those for which one cares more. Necessity forces this kind of choosing not only upon individuals but also upon communities and nations.

This choosing of what one will have takes on many and various forms and takes place many times every day in the life of every normal person. One may have to choose between play and work or between different kinds of work, different kinds of play, or different objects which one might purchase with one's limited money or purchasing power. The problem is always how to use one's time, one's working power, or one's wealth in such a way as to accomplish the most in the promotion of one's interest or the fulfillment of one's hopes and purposes. This is a problem, however, not for the individual alone but for the

community, the nation, and the world at large. The community and the nation, like the individual, have common interests which can be promoted only by common effort. How to use the energy of the community and of the nation economically (that is, in such a way as to accomplish the largest and best possible results) is a problem of the greatest possible importance. In a democracy especially it is fully as important that the citizen should understand how the community and the nation may economize their energies and achieve the utmost in the way of civilization and well-being as it is that he should understand how he may economize his own individual energy and accomplish the utmost in the promotion of his own interest and the fulfillment of his own hopes. Moreover, the former is a vastly greater and more difficult problem than the latter. It will require a broad, careful, and systematic study of economic principles instead of a narrow, piecemeal, haphazard study of individual problems in economy.

When you are asked to do a certain thing and you reply that you have not time, you are sometimes merely trying to be polite. You may really mean that there is something else which you would rather be doing with your time or which you feel to be more important than the thing you are asked to do. In other words, you have not time and energy enough to do everything you would like to do or that others would like to have you do. You must leave many things undone, and you must, therefore, choose rather carefully the few things that you think most important or that would cause you the most inconvenience or pain if left undone. In order that you may do these few and important things you must refuse to do anything else that would interfere. That is what it means to economize time and energy. It is choosing to do the more important things, leaving the less important things undone. Economizing in the use of money is only one special form of economizing time and energy, since money represents the products of time and energy.

Why we have to economize. In saying that you do not have time to do a certain thing you are stating one of the most funda-

mental facts of life; namely, the great and ever-present fact of scarcity. It is this fact which compels us to economize, which compels us to make our limited fund of energy and our limited time go as far as they will. To waste time or energy is to fail to supply ourselves with some of the things we want. To waste things that have already been produced is no worse than to waste the time and energy that might have produced more of the same things.

Wasting time and energy does not necessarily mean remaining idle, though it may mean that. It may mean also the doing of less important things when there are more important things to be done. If one had unlimited time and energy, or if one had the time and energy necessary to do everything one would like to do, so that the doing of one thing never prevented the doing of anything else worth doing, economy would be unnecessary. If that were true, human life and human history would be very different from anything we now know, and this world would be so unlike the present world that none of us would recognize it.

By the use of time and energy we find or produce goods and commodities; that is, the material things which are the means of satisfying our desires. Therefore, when we say that we cannot afford a certain article we mean very much the same thing, fundamentally, as when we say that we have not time to do a certain thing. In both cases we are merely stating the great fact that it is necessary to economize, to choose what we will do with our limited energy or our limited money to the exclusion of other things. The fact that time and energy are insufficient to enable us to do everything that we might like to do makes it certain that we cannot produce everything that we should like to have and that, if we could, we should not have time to do something else. If we were to work all the time, we should have no time to play; and everybody likes to play—that is, everybody worth mentioning. We must, therefore, choose whether to deprive ourselves of the opportunity to play in order to get certain goods that we want, or to reduce somewhat the number of goods we consume in order to have more time to

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play. Again, if one works too long on one kind of goods one has less time and energy left to produce others. At every step in the life of every normal human being, therefore, he is confronted with some problem in economy.

As already stated, the necessity for economy grows out of the scarcity of something or other,—either the goods which are necessary to the satisfaction of our desires, or the time and energy necessary to produce those goods. Find an individual who experiences no lack or scarcity of anything and I will show you an individual who has no need for economy; but you will look a long time before you find him.

Getting and spending. In the practical, everyday life of the average person problems of economy are mainly focused on the problems of getting and spending,—of income and expenditure, or of business and the household. If one's income is less than one would like to have it, it means that one's desires run beyond one's income. Such an individual, therefore, tries, first, to increase his income and, second, to get as much good out of it as he can: that is, to spend it as wisely as he knows how. This is true not only of every individual and every family but also of every organization, even the state itself, and it is even true of all the people as distinct from their government. The greater part of the time and energy of the people in this world is spent on these matters, but it is spent in a great variety of ways.

A glance at the diagram at the beginning of this chapter will give one a general idea of all the forms in which the problem of income and expenditure presents itself. The reader will get, at the same time, an idea of the principal branches of the great science of economics, for economics is, in one aspect, simply the study of the problem of income and expenditure, both of which are fundamentally problems in economy. In order to increase one's income one must economize one's time and working energy. In order to make one's income go as far as possible one must economize it, buying only the most important things and making them go as far as they can be made to go in the satisfaction of one's wants. In brief, economy of goods con-

sists in trying to make things that are scarce go as far and accomplish as much as possible.

Economics and household management. It was stated above that historically economics meant the management of a household and that when the word was first used a household was a simple, self-sufficing household. In such a household the problems of getting and spending, of income and expenditure, of business and home life, were not very distinct. The income was made up of the products of the farm and not of the money for which those products could be sold, because they were not sold, as a rule. There was practically no expenditure of money; but the household used the things that were produced within it, since the farm was considered a part of the household. In this simple household, however, the fundamental problems of economy had to be worked out very much as they are in the modern business or the modern household. The working power of the household had to be very carefully economized. The economizing of the working power consisted, first, in keeping it active instead of allowing it to go to waste in idleness; second, in directing it efficiently, so that as little effort as possible should be wasted by lost motion, poor tools, or inefficient and haphazard ways of doing things; third, and quite as important as either of the others, in directing it wisely, or directing it toward the production of things of vital importance to the well-being of the household and not wasting it in the production of trivialities.

Household management and national economy. In some respects the problems of the self-sufficing household more nearly resemble those of the modern nation than those of the modern business or the modern household. The prosperity of the nation requires the same forms of economy in production. The nation that wastes its time and working energy in idleness or leisure will, of course, fail to achieve its maximum prosperity. Likewise the nation whose people do things in inefficient ways, by slipshod methods, or with inadequate tools and equipment will fail to become as prosperous as it might become. In these two respects the private business of today and the nation's busi-

ness are much alike. In the third form of economy, however, there is some difference; a private business may prosper by producing frills and luxuries, sometimes even by pandering to vice. This could not be true of a self-sufficing nation any more than of a self-sufficing household of the primitive type. It is quite as important that the national energy be devoted to the production of important rather than of unimportant things as that the nation should be industrious or efficient in its methods of production. In other words, it is no greater waste of the nation's resources to have them remain idle than to have them misdirected or employed, however efficiently, in the production of useless things. Again, it is no more wasteful of the nation's resources to have its labor used very inefficiently by slipshod methods and poor tools than to have it engaged by the most efficient methods and the best possible tools in the production of useless or harmful commodities.

In the primitive, self-sufficing household there was very little buying and selling within the household. In the modern self-sufficing nation there is a vast amount of buying and selling among its own citizens. The subject of exchange, therefore, forms a most important part of the economy of the nation but a negligible part of the economy of a self-sufficing household. Again, the problem of the sharing of the income among the members of the household may have been a matter of some importance, but it could not have been nearly so important as it has become in the modern nation with its great diversities of interests and its wide separation of industrial classes and groups.

Another important change has taken place in the household itself: whereas in the primitive, self-sufficing household the problems of getting and utilizing were very closely related, in the modern household they are very widely separated. In recent times, especially in our cities, what is called business has come to be regarded as the source of income, whereas the home is the place where the income is utilized. Business life and home life are so distinct as frequently to be regarded as different and almost unrelated fields of action. This separation of business

from the home has given rise to a division of the field of private economics into two distinct parts, one of which is known as business economics, the other as home economics. That these two parts, which the Greeks regarded as the same subject, are now so widely separated shows that we have gone a long way from the primitive condition in which business and home life were united, and are approaching, if we have not already arrived, at a condition in which they are completely divorced. Whether this is, on the whole, a good tendency or only partly good and partly bad, is a very interesting and difficult problem.

Public income and expenditure. But the problem of income and expenditure is a serious question for the public as a whole as well as for the private citizen. The state gets its income from different sources and by different methods from those pursued by the individual, but income is as necessary to a state as to a citizen. In order that its limited income may go as far as possible and accomplish the greatest possible good the question of public expenditure must be studied with the greatest care. It is scarcity in this case, as well as in the case of the individual, which makes economy necessary. If we could imagine a state with an unlimited income,—which we cannot,—so that when it spent money for one purpose it was not obliged to refrain from spending money for any other purpose, there would, of course, be no occasion for public economy. Xenophon, who wrote our oldest treatise under the title of "Economics," wrote also a treatise on "The Revenues of Athens." In the former work he was well within the field of private economics, but in the latter he had got well over into the field of public economics. This branch of public economics, or political economy (that is, the branch which deals with the revenues and expenditures of the state, or with what has been called the housekeeping of the state), is commonly called public finance. It will readily be seen that there is a close resemblance between public finance, which deals with the income and expenditure of the government, and private economics, which deals with the income and expenditure of the private family.

Social well-being. But there is another branch of public economics which is broader than public finance; that is the branch which deals with the general problem of social wealth or well-being. This branch deals neither with the income and expenditure of the individual family as such nor with those of the government as such. It deals rather with the income and expenditure of the people as a whole. This is called social economy or social economics. It is the most important study for the real statesman or nation builder. Since in a democracy everyone is a nation builder (in a small way at least), in that he helps to determine the policy of the nation, it is of the greatest possible importance that everyone should study the problems of social economy as well as those of public finance and private economics.

The management of the king's household. A good illustration of the importance of this subject is found in the studies of a group of scholars who some hundreds of years ago were studying the problem of providing for the king's household. These were the finance ministers of certain kings of European countries. They are now sometimes called the cameralists. Having charge of the affairs of the king's household, they were, in a sense, studying private economics; but since the king was a public functionary, deriving much of his revenue from taxation and other public sources and performing many of the acts of government, these finance ministers were, in another sense, studying public economics. At any rate, they were severely put to it to find revenue enough to pay the expenses of the royal household or to keep the expenses within the royal revenues; that is, to balance income and expenditure. These were problems in economy. How to get as large an income as possible with the limited energy at their disposal, and how to expend that income so as to add the maximum to the resources of the king's household, were very serious problems.

The social income. The more they studied this problem the more clearly they saw that in order to increase the royal income the people over whom the king ruled must be made prosperous;

that is, the social income also must be increased. "Poor people, poor king" came to be an axiom in public finance. Therefore attention was given to the problem of increasing the social income or of promoting the prosperity of all the people. Later writers have given their chief attention to this part of the problem. In the outline at the beginning of this chapter this is called social economy.

Exchange. In one sense, as already pointed out, the social income is the annual production of the nation. So there was a tendency at first to give chief attention to the subject of production; but it was soon discovered that in social economy exchange was an important factor. In studying the internal economy of an individual household, whether a private or a royal household, exchange among the members could be left out of account; but in studying the internal economy of a whole nation it could not be left out of account, for the obvious reason that the citizens of the nation did a great deal of exchanging among themselves. This is particularly true of the modern nations. Buying and selling have come to be so large a part of the economic life of the people that for a long time it seemed to many students to be the most important aspect of economic life. So there came a time when the chief emphasis was laid upon exchange rather than upon production. Indeed, it was assumed for a time that production would almost take care of itself; that is, each individual would look after his own part in it if only the government would provide him safe and open markets and a convenient medium of exchange in the form of money and sound banking facilities.

Distribution of social income. Still later another problem was discovered to be of equal or greater importance. Like the problem of exchange this was one which also could be ignored in the study of private economics. It is the problem of the division of the products of industry among the workers. When a large number of people take part in the production of a given commodity, say shoes, the question as to how much of the value of the shoes shall go to each person or group of persons is of the

utmost importance in social economy. The farmer, the miller, and the baker, as well as the carrier, have all had something to do with the production of a loaf of bread. It is very important to know how much of the value of the bread goes to each of those who have had a part in its production. This is called the problem of distribution; as you will see, it is somewhat different from the problem of exchange, though very closely related to it. Such questions as the wages of different classes of laborers, the rent of land, the interest on capital, the profits of enterprise, are parts of the general problem of distribution. During the last fifty years, it is fair to say, more emphasis has been laid upon the subject of distribution than upon either production or exchange.

The utilization of the social income. While the consumption of the people has been recognized as the utilization of the social income, and therefore as a thing important in itself, yet students have almost ignored it as a branch of the science of economics. One reason has doubtless been the feeling that every individual would better be left to consume his income as he liked, whether he did it wisely or foolishly, beneficially or harmfully. Attempts to control or direct his consumption have been called sumptuary laws. By pronouncing these words with a wry face such attempts may be discredited, that is, for a time. Meanwhile, however, every progressive community has gone right on passing sumptuary laws, in one form or another, sometimes to the great advantage of the people, sometimes to their disadvantage. Students are, therefore, becoming convinced that the consumption of wealth merits a great deal of study, that it is going to be controlled and directed by the state whether we like it or not, and that whether it is controlled and directed wisely or unwisely will depend upon how carefully and intelligently it is studied. In fact, a few are already beginning to discover that consumption is more important than production, exchange, or distribution—possibly more important than all three combined.

CHAPTER II

ECONOMIC DESIRES

Desires as motives. The purpose of economy is to enable us to secure the fullest possible satisfaction of our desires. The more desires we can satisfy, or the fewer we leave unsatisfied, the more prosperous we become. These economic desires, moreover, furnish the constant motives to economic action, though they are supplemented by instincts, impulses, and other motives not so well understood.

The need of an adequate motive. Whenever a new enterprise is proposed, whether in the field of business, politics, education, or philanthropy, one of the first questions that ought to be asked, after ascertaining that the purpose of the enterprise is a worthy one, is, Where is the motive? or, Who has a sufficient motive for carrying it on? Many an excellent plan—excellent in other respects—has failed merely because no one had a sufficient motive for spending the vast amount of time and energy necessary to make it succeed. New enterprises have to be nursed along and coaxed into success; and no one will take the necessary pains unless he has a powerful and persistent motive. Sudden enthusiasms are soon spent, even the pleasure of doing something new wears out when the enterprise ceases to be new. Some motive is needed that does not wear out but renews itself every day. Physical wants have this quality, because the human body requires constant supplies of goods.

Transitory motives. Many of our impulsive and instinctive actions are desultory because as motives they are easily satisfied and are not self-renewing. Every spring, about the time the frost is out of the ground, nearly every man feels an impulse to dig. It seems as natural for him to dig at that time of the year as for the sap to run, the crocuses to push upward, geese to fly

northward, or boys to play marbles. But this impulse is soon satisfied; and, unless some other and more persistent motive begins to function, every man will begin soon to neglect the garden so heroically begun. Many other impulses or instincts are about as ineffective as this one as motives for the continuous toil and taking of pains that are necessary in modern production.

Kinds of desires. There are at least three kinds of self-renewing desires that play an important part in our economic life or that supply us with motives for economic action—the desire for action, the desire for esteem, and the desire for material goods. All three show themselves very early in the lives of children and remain with them as long as they are in the land of the living. They function continuously and persistently as motives; they do not wear out, but drive us all the time. They may seem like selfish desires; but even benevolence is likely to take the form of desiring one or more of these things for others. The sympathetic person who enters into the thoughts and feelings of others, realizing that they desire these three things, is very likely to desire that they should have them.

Desire for action. The desire for action results in play; but there is an element of play in many kinds of work. In general, play may be defined as any action which is itself so pleasurable as to provide a sufficient motive. Frequently, however, the desire for esteem adds to the strength of the motive for play, especially when a popular game furnishes an opportunity for the exhibition of prowess. Even the desire for pecuniary gain has been known to enter in; but this is generally considered bad sportsmanship. Work may be defined in general as any action which requires some other reward than the pleasure of the action. This does not mean that there is no pleasure whatever in the action which we call work. It means simply that the play motive is not the only motive, generally not the chief motive, and sometimes, in the case of disagreeable work, no motive at all. Work, like play, is sometimes done partly to win the esteem of others. It is frequently done with that desire as

one of the subordinate motives, but generally it is done for the purpose of gaining a reward in the form of material goods.

Desire for esteem. The desire for esteem or for the good opinion, the praise, and the admiration of others is as genuine a motive for action as either of the other kinds of desire. It is in some cases the sole motive for action; but it is generally found working in combination with one or both of the others. As stated above, it is sometimes one of the motives to play. Even what appears to be the desire for material wealth is frequently in part a desire to achieve social esteem by means of material possessions. A woman's desire for finery is not solely nor usually due to her appreciation of the things themselves. It is generally and mainly a desire to be thought well of. The same may be said of a man's desire for those strange things which he so solemnly wears on state occasions when he takes himself seriously. The desire to make an impression upon others enters into his appreciation of a great many things besides clothes. It is an element in his desire for fine houses, trains of servants, costly equipages, and many other expensive things which add very little to comfort or well-being.

Desire for material goods. Even when the desire for esteem seems the chief desire there is usually found a mixture of the others. The politician's desire for popularity is not in every case free from the desire for the salaries and other emoluments of office. Nor is the actor's desire for applause always free from the subconscious feeling that popular esteem may be followed by an enlarged income.

Importance of balanced desires. While it is possible to discuss these three kinds of desire separately, yet, as a matter of fact, they are likely to be mixed in varying proportions in every individual case. It is probably better economically that they should be thus mixed and that no one kind of desire should exclude or predominate over the others. When this happens we are likely to have an unbalanced individual, of very little use to himself or anybody else. The one who cares inordinately for action, with very little regard for social esteem or for the

material rewards of productive labor, is likely to waste his life in strenuous adventure, even if he does not become a criminal. The individual who cares inordinately for the esteem or admiration of others, with very little desire for action or for the material rewards of productive effort, is likely to be vain, effeminate, and weak even if he does not become a *poseur*, who tries to attract attention to himself by striking strange attitudes, saying weird things, or espousing strange causes. The individual who cares inordinately for material goods, with no liking for action or for the good opinion of his fellows, is likely to become hard, grasping, and miserly. Which of these three unbalanced individuals is the most undesirable would be hard to decide.

So far as the nature of a man's desires can make him useful economically it is probable that the most useful man is the one in whom all these three kinds of desire are strongest, provided there be a proper balance among them. The man who loves action intensely, who at the same time desires intensely that his fellow men should think well of him, and who has also an intense desire for an abundance of goods for himself and for those for whom he cares, will certainly be an energetic, neighborly, and, so far as his physical and mental powers will enable him to be, a productive individual.

Satiability of desire. When we come to consider desires separately and to compare them one with another, we find that they have certain things in common which are of the utmost importance to the student of economics. To begin with, all desires are satiable.

Desire in general may or may not be satiable—that is no concern of the economist; but the specific desire for any specific thing may be completely satisfied or satiated if the thing desired can be had in sufficient abundance. Many desirable things are to be had in sufficient abundance. In the case of air, for example, though it is a vital necessity, yet there is so much of it, except in crowded, poorly ventilated rooms, that everyone can have all he can possibly use. Under such circumstances no one

has any desire for more nor any motive for action looking to an increase of the supply. In a crowded room, or anywhere else where there is not enough, someone who desires more will have a motive to action, even if the action consists in nothing more than opening a window.

The desire for air, however, does not differ in this respect from the desire for anything else. When it is fully satisfied or satiated it ceases to be a motive for action. So long as it is unsatisfied it is a motive for action. In other words, if there is enough of the object desired to satisfy everybody, no one is likely to bestir himself to try to produce more, even if he knew how to do so. If there is not enough of anything there is a motive for action looking to an increase of production, and if production is possible an industry is likely to come into existence.

Unsatisfied desires as spurs to action. Not only is every desire satiable, but we observe as a part of our own experience and our observation of others that the more nearly a desire comes to being satisfied the weaker it becomes and the weaker the motive to action. Conversely, the further it is from being satisfied the stronger it is and the more powerful the motive to action. This is a physiological fact, which if anyone cares to dispute it, he can test by experimenting on himself, or merely by thinking about his own everyday experiences as they come to him. The hungrier a boy is for apples, the more powerful the temptation to acquisitive action. In the process of consumption the first apple is likely to taste a little better than the second, the second than the third, and so on, until eventually, if the supply of apples holds out, he may reach a point where an additional apple will add nothing whatever to his comfort or pleasure. This is true of every desire in the whole range of human interests.

Care must be taken, however, to avoid shifting the attention from one desire to another. The desire for wealth in general is sometimes said to be insatiable. Even if this were true, as it probably is not, it would not refute the proposition that any

specific desire is satiable. Wealth is a collective name for a vast number of things. As soon as the desire for one thing is satisfied there is very likely to be something else which one would like to have, and so on almost indefinitely. In other words, the attention shifts from one thing to another. Nevertheless, when the desire for one specific thing is satisfied that particular desire no longer furnishes a motive to action. The thing desired will then be held in low esteem, will have little value, and, if it sells at all, will sell at a low price.

Anticipated future desires. We must be careful also not to confine our attention to the desire of the present instant. We are creatures endowed with a certain degree of foresight. Therefore, the temporary satiation of a desire is not to be considered as its complete satiation. After a good meal we are doubtless temporarily satisfied with food; but that does not mean that we have no motive for further effort to procure food. We foresee other mealtimes in the future and realize that unless we bestir ourselves now we may have to go hungry then. In this respect the desire for food does not differ from the desire for anything else. If we were to foresee a set of circumstances in which we should not have air enough, we should be very active in the present trying to avoid those circumstances or to safeguard our future supply of air. In short, forethought enters into the question of satiation of desire in the case of all creatures who have the capacity for appreciating future as well as present needs.

Desires are self-centered. Next to the satiability of desires their most important characteristic is that they are self-centered, though not necessarily selfish; that is, we desire the good things of life for some people more than for other people. We usually include ourselves in the preferred list. The others whom we include in this list (that is, those for whom we have this preference) are in some way grouped around ourselves as centers of appreciation and interest. Even the humanitarian who professes to care for mankind above all nations seems still to prefer mankind to other species. There are people who

have so deep an interest in animals as to be unwilling to sacrifice any animal for the benefit of mankind. They are slightly less self-centered than the humanitarians, but even they cannot take quite the same interest in the lower as in the higher animals. In short, no one can avoid being slightly self-centered—caring more for some animals than for others, for certain races or nationalities of men than for others, or even for certain persons than for others. Generally it will be found that those species, nationalities, or persons for whom we care most are in some sense nearer to ourselves than those for whom we care least.

This fact of self-centered interest must be taken as one of the original, or primary, facts in our problem of nation building. It is, therefore, very important that we examine it and see exactly what it means.

What is self-interest? Our discussion will center naturally around two main questions: first, What does it mean to be self-interested? and, second, Is it a good or a bad thing for each individual to be self-interested or at least slightly self-centered, as we shall call it? In discussing the first of these questions it is not necessary to go very far into that form of hair-splitting analysis which considers whether benevolence is not merely another form of selfishness.[1] It is sometimes argued by a certain kind of sophist that the benevolent person is benevolent because he gets pleasure from being benevolent. Since it gives him pleasure, it is only a form of self-gratification; and since it is only a form of self-gratification, it is only another form of selfishness. It may be true, from a certain point of view, that a man may get more pleasure from the taste of food upon the palates of his children than upon his own. A sophist might say that he was as truly selfish as a man who got no pleasure whatever from the taste of food upon any palate but his own. However, no sensible person would remain long in doubt as to which would make the better father. There is no doubt that the man who takes some delight in the welfare of his neighbors

[1] See the author's "Essays in Social Justice," p. 60. Harvard University Press, 1915.

and fellow citizens is a better neighbor and citizen than a man who takes no pleasure whatever in such things.

In trying to understand what self-interest really is there are two extreme views to be avoided. One is that *self-interest* means such extreme selfishness as to show no regard whatever for the interests of others; the other is that *benevolence* means a real preference for other people as compared with self. Now *self-interest* simply means some preference for self as compared with certain other people; and *benevolence*, instead of meaning a preference for other people, is quite compatible with some degree of preference for self. There is probably no human being who has not some interest in other people besides himself; neither is there anyone who does not care more for himself than he does for other individuals outside a rather narrow family or neighborhood circle.

The difference between a selfish and a benevolent person. As a matter of fact the difference between a selfish and a benevolent person is one of degree. An extremely selfish person is one who has an extreme preference for self as compared with others and whose interest in other people does not extend beyond a rather narrow circle of relatives, friends, and neighbors. An extremely benevolent person is one who has only a mild preference for self as compared with others, whose interest in others extends to a rather wide circle of relatives, friends, neighbors, fellow citizens, and many other human beings, and who even includes some of the kindly animals in the circle of his care and protection. To prefer the satisfaction which the expenditure of a dollar on charity gives me to the satisfaction which it would give me in the gratification of my own palate does not mean that I have a deeper interest in the receiver of my charity than I have in myself. If I spent the dollar upon myself it might supply only a trifling need or gratify a mere whim or caprice, because I have spent so many other dollars on myself as to have supplied all my principal needs. But when it is spent in charity it may supply a vital need of someone else. If I were in exactly as great need as he

of the objects which my last dollar would purchase, and I then gave him my dollar, that would show that I appreciated his interest as highly as my own or even more highly than my own. If there are a number of people in whom I am so deeply interested as to be willing to sacrifice myself even to a slight extent, I should pass for a fairly generous man. But while I am writing this I am fully conscious of the fact that there are people in various parts of the world who are suffering from hunger, cold, and sickness. Yet I sit comfortably in my room instead of going out to find them and share my last dollar with them. They are so far away in space, or they are so removed from myself in race, language, religion, or color, that I cannot cudgel myself into caring as much for their comfort as I do for my own. If they were near neighbors or near relatives I should take a deep interest in them. Will the reader ask himself if he is not in about the same condition? The way in which I appreciate an income for myself more than I appreciate an income for someone else may be illustrated by means of the diagrams below:

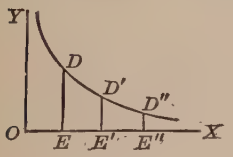


Diagram A

A's appreciation of his own income

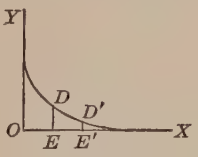


Diagram B

A's appreciation of B's income

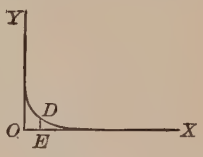


Diagram C

A's appreciation of C's income

In Diagram A let us measure the income of a certain man, whom we shall call A, along the line *OX*, and his appreciation of, or interest in, each dollar of his income along the line *OY*. Thus, if his income is equal to the line *OE*, his interest in each dollar is measured, let us say, by the line *DE*. But as his income increases, each dollar becomes a matter of less consequence to him. He could spare it with less real sacrifice, because, having so many other dollars, he can still supply himself with all the necessaries of life and some unnecessary things

besides. In other words, if we assume that his income increases from a quantity measured by the line *OE* to a quantity measured by the line *OE'*, then his interest in each dollar will decline from an intensity measured by the line *DE* to an intensity measured by *D'E'*. Another increase, say to the line *OE''*, would bring another fall in his appreciation, or interest, say to the line *D''E''*. From these assumptions we may derive the curve *YDD'D''* to indicate his appreciation of, or interest in, each dollar of his income.

Another way of stating the case is as follows: Assuming that his income is measured by the line OE'', to give up one dollar of his income would cause him a sacrifice measured by the line D''E''. He would merely have to give up some unimportant luxury for which he does not care very much. If he were to keep on giving until there remained an amount measured by the line *OE'*, he would have deprived himself of more and more important things or of things for which he cared more and more. To give away still another dollar would cost him a sacrifice measured by the line *D'E'*. If now he keeps on giving until there is left only an amount equal to *OE*, he will be cutting so deeply into his own needs that each dollar given away would deprive him of something very important to his own well-being and would occasion him a sacrifice measured by the line *DE*.

Interest in those near to self. But this man has an interest in someone else and is genuinely desirous of seeing that other person comfortable and happy. In case that other person is peculiarly dear to him, his appreciation of that person's income might be quite as high as his appreciation of his own. In that case the same curve, *YDD'D''* in Diagram A, would represent his appreciation of the other person's income. But he will not feel so deep an interest in very many people. After you get beyond the members of his immediate family and a few intimate friends, if he is a generous man, and even before that, if he is a selfish man, you will find people in whom he has no

such intense interest. In this case his appreciation of the importance of an income to that other person will be represented by Diagram B.

In Diagram B we will measure the income of the other person, whom we shall call B, along the line *OX*, and A's appreciation of B's income along the line *OY*. If B's income is very small, measured, let us say, by the line *OE*, A will desire to see that income increased. The intensity of that desire of A is measured, let us say, by the line *DE*. If now A's income is measured in Diagram A by the line *OE''*, he will be willing to give up a part of his own income in order to add to B's income. The line *DE* in Diagram B is longer than the line *D''E''* in Diagram A.

This kind of giving is quite consistent with the fact that A cares a great deal more for himself than he does for B. The relative height of the two curves *YDD'D''* in Diagram A and *YDD'* in Diagram B indicates the degree of preference for himself. Under the conditions represented in the two diagrams, A will by no means divide evenly with B. That is to say, he will not cut his own income down from an amount measured by *OE''* to an amount measured by *OE'* in Diagram A in order to increase B's income to an amount measured by *OE'* in Diagram B. That would give them equal incomes; but A's enjoyment of the last dollar of B's enlarged income would be measured by the line *D'E'* in Diagram B, while if he had kept that dollar for himself, his enjoyment of it would have been measured by the line *DE* in Diagram A.

Interest in others who are not so near to self. When it comes to some other person, whom we shall call C, who is so distantly removed from A in space or in kinship that A takes very little interest in him, we may find that A's interest is represented by the curve *YD* in Diagram C. Applying the same comparisons between Diagrams A and C that were made between Diagrams A and B, we shall find that A might give up a dollar to keep C from starvation, if C's condition were presented to

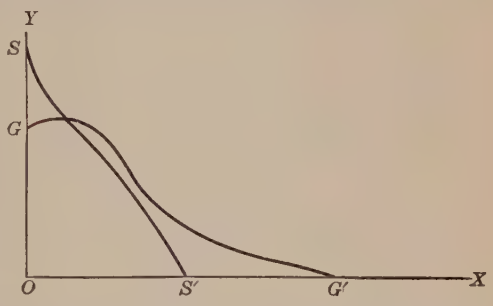
him pretty strongly, but that is about as far as A will go in relieving C's distress.

Under the conditions that we have described, A would pass as a very benevolent man. If he were what is ordinarily regarded as a selfish man, the curves YDD' in Diagram B and YD in Diagram C would merely be somewhat lower than we have drawn them, or the curve $YDD'D''$ in Diagram A would be higher than we have drawn it.

Nearness in kinship. Even though a generous man will care a great deal for the interests of a great many people, nevertheless he is somewhat self-centered in his appreciation of or interest in others. He will care more for some people than for others, —more, for example, for his own wife and children than for other men's wives and children, more for his own relatives than for other people's relatives, more for his own neighbors than for other people's neighbors, more for his own fellow citizens than for the citizens of other countries. Those for whom he cares most, or whose interests he feels most keenly, are those who are in some way closely associated with himself. They are near to him, if we may be permitted to use the word "near" in several senses besides the geometrical or geographical sense. They may be near to him in point of kinship. Thus, other things equal, he will be more generous toward his near of kin than toward those who are distantly related to him, toward human beings than toward animals, and toward the higher than toward the lower animals. Again, mere geometrical nearness counts as a factor. A man who is suffering at his door or in his immediate neighborhood will move him more than a man who is suffering equally but who is a long way off. This may sometimes be a stronger factor than nearness of kinship. That is, a near neighbor who needs help will appeal more powerfully to his sympathy than a near relative who lives a long way off. He may even do more for an animal with whom he is closely associated, such as a favorite horse, dog, or cat, than for some human being who is far away. Space is almost as important a factor as kinship in limiting his interests.

Nearness in time as well as in space. Time also is a factor. Our generous man is more interested in his immediate children than in his distant descendants, more in his contemporary fellow citizens than in future generations. He is more interested even in his own present wants than in his future wants.[1]

There are other senses than space, kinship, and time in which the word "near" can be used. There are those who are near in the sense of like-mindedness. They who think and feel on most important questions as he thinks and feels may be said to be near him in a very important sense. He is pretty certain to care more for them, other things equal, than for those who think and feel differently. This may sometimes prove so strong a tie as to cause him to desert not only his neighbors and fellow citizens but even his family in order to take sides with those who think and feel as he does.



In short, a man's interest in others is limited by the factor of distance in space, time, or kinship, and in unlikeness, either physical, moral, or mental. The greater the distance which separates them from him in any or all of these respects, the less his interest in them tends to become; while the nearer they are to him in any or all of these respects, the more intense his interest in them tends to become. He is thus self-centered in his appreciation of the interest of others even when he is broadly generous. When he is narrowly selfish he is more narrowly self-centered.

Self-centered appreciation. This principle of self-centered appreciation may be illustrated by the diagram above. Let us

[1] Cf. Chapter XXXVIII, on The Desirability of Capital and its Relation to Interest.

assume that the individual's appreciation of the interest of various persons, including himself, is measured along the line *OY*. Then let us assume that he himself stands at the point *O*, while others are ranged along the line *OX* in the order of their nearness to himself in some of the senses in which we have used the word "nearness." Let us take kinship, for example. Those nearest of kin would stand on the line *OX* nearest the point *O*, and those most distantly related near the opposite end, or the point *X*. We will now let the curve *SS'* represent the selfish man's appreciation of the interests of various persons. The line *OS* measures his appreciation of his own interest, or his interest in himself. His appreciation of the interests of another person is measured by the perpendicular distance from the point on the line *OX* where that person stands to a point on the line *SS'*. Thus his appreciation of the interests of his immediate family may be almost as high as his appreciation of his own interest. But he cares so little for other people, and those for whom he cares even a little are so few in number, that the curve *SS'* falls very rapidly. Distant relatives who stand beyond the point *S'* on the line *OX* do not concern him in the slightest degree. He has no appreciation at all of their interests.

In the case of *G*, who is a generous man, the curve is different. It is represented by the curve *GG'*. Following the same explanation as was given of the curve *SS'*, we find that the curve *GG'* represents him as caring a little more for a very few persons than for himself. Then his interest in others begins to decline the farther they are from himself, until, when we find some who are so far removed as to stand beyond the point *G'* on the line *OX*, his interest in them disappears altogether.

It is human to show preferences. Any being who did not show such preferences as these would scarcely be human. He who would not sacrifice a trifle even to save the life of his nearest of kin or his nearest neighbor would not be a man but a devil. Again, he who would not show more interest in his near of kin than in his distant of kin, in his near neighbors than in his distant neighbors, in his fellow citizens than in the

citizens of other countries, in kindly disposed men than in evil-minded men, in men than in animals, or in the higher than in the lower animals, would not be much better than a devil. If, in a struggle between a man and a tiger or a man and a disease germ, he did not show some disposition to favor the man, or if in the struggle between a good man and a criminal he did not show a preference for the good man, we should probably call him by some pretty hard names. Zeus alone among the gods has been represented to us as showing no preference for either the Greeks or the Trojans in their memorable struggle. All the lesser gods showed preferences and took sides, but he maintained an attitude of supreme indifference to the petty quarrels of mortal men. If you will try to appraise his morals you may find some difficulty in deciding whether they were godlike or devilish. They certainly were not human.

Does it work well to be self-centered? We come now to the second of the questions stated earlier in this chapter. Does it work well or badly for the individual to show self-interest or to be self-centered in his appreciation of human interests? No one is likely to deny that he should show a preference for human beings as compared with other creatures. We hear a few vague suggestions now and then to the effect that each one should be a friend to man and that he should not show preference for special groups or classes of men. Aside from the vagueness of the idea of friendship to man there are one or two difficulties. Suppose you found a person who was not a friend but an enemy to man, should you befriend him or not? If you befriend an enemy of man are you yourself a very good friend to man? In order to befriend man must you not be an enemy to the enemies of man? If so, you must discriminate and show a preference for the friends of man as against the enemies of man. In other words, you must divide men into at least two classes, namely, the friends and the enemies of man, and show more regard for and interest in one class than in the other. In the case of the average individual these classes resolve themselves into those whom he approves,

on the one hand, and those whom he disapproves, on the other. If he is wise in his approvals and disapprovals this will probably work well. He lends his encouragement and strength to those who pass it on,—who use the strength which they receive from his friendship in doing good rather than evil. Thus the giver does more good than he would if he gave his encouragement and strength to evil men and good men alike. He should show at least that degree of preference for some men as against others.

Preferring some people to others. But granting that one may be justified in showing a preference for good as compared with bad men, is one justified in showing a preference either for himself or for those who are near to him in any of the senses which we have been discussing; that is, for his family or his neighbors as compared with others outside those circles? There is something to be said in the affirmative, provided the preferences are not too extreme. Volumes have been written on this and similar problems, and doubtless many more will be written. The affirmative argument may be stated briefly in the form of a series of propositions:

1. *Who ought to look after and safeguard each interest?* Every interest ought to be safeguarded and provided for by the person who can do so most effectively. National or social welfare consists in the most complete satisfaction of all the interests of all the people. The more fully and completely every interest is safeguarded and provided for, the greater the prosperity and welfare of the whole group. Therefore, when each and every interest is looked after by that particular person who can look after it most thoroughly and successfully, the social welfare will be greater than it would be if some interests were looked after by persons who were not best fitted to do so.

2. Generally speaking, but with a few exceptions, each and every interest can best be safeguarded and looked after by that person who knows and understands it most intimately. Jones probably knows his own interests better than he knows those of Smith. If so, he can usually look after his own interests

more effectively than he can attend to those of Smith. Likewise, and for the same reasons, Smith can look after his own interests better than he can those of Jones. Under these circumstances the interests of both Jones and Smith will be looked after better if each looks after his own than if each looked after the other's. However, there may be exceptions to this rule. Jones may know his own interests better than Smith, but may be in some unfortunate condition which renders him unable to look after them. In such a case, even though Jones does know his own interests better than Smith, Smith may nevertheless be able to look after them better than Jones can. In such a case it would promote the prosperity of that community of two if Smith would spend a part of his time looking after Jones's interests. However, as soon as Jones recovers from his incapacity it will be better for both if they return to their normal habits and each looks after his own interests.

3. *Who knows each interest most completely?* Generally speaking, but with a few exceptions, the individual of mature years and sound mind knows his own interests more intimately than other people know them and also more intimately than he knows the interests of other people. Young children, of course, do not know their interests as well as these are known by their elders, nor do persons of unsound mind know their interests as well as these are known by individuals of sound mind. Occasionally a mature person of sound mind may be mistaken in his judgment as to his own interests, and some exceptionally wise friends may know them better than the person himself does. In all these cases there are excellent reasons why wiser persons should take a great deal of interest in the affairs of those less wise than they, but it is well not to be too hasty in assuming that you are wise enough to look after the interests of a mature person of sound mind better than he can do it himself.

4. Generally speaking, but with a few exceptions, the individual knows the interests of his near of kin better than he knows those of his distant of kin, of his fellow citizens better than

those of citizens of other countries, of members of his own race better than of members of other races. He is in much more intimate contact with the members of his immediate family than with others, and, even aside from all questions of affection, he can gauge their desires and understand their needs better than he can the desires and needs of those with whom he is not so intimately associated. That is a sufficient reason why, in the economy of nature, he should care more for them than for others. If he were driven by his affections to try to care for those whom he did not understand, while neglecting those whom he did understand, he would bungle much more than he does. Therefore nature is wise in so ordering things that affection and understanding normally go together.

5. Generally speaking, but with a few exceptions, the individual knows the interests of his near neighbors more intimately than he knows those of his distant neighbors. Here again it is a wise provision that friendship and understanding go together.

6. *Whom can we reach with the least waste of energy?* Generally speaking, but with a few exceptions, the individual can reach his near neighbors with less effort and waste of energy than he can reach his distant neighbors. It is wise, again, that neighborly feeling develops where there is the most power to help. If each man neglected his near neighbors and attempted to look after his distant neighbors, while their near neighbors in turn neglected them and tried to look after their distant neighbors, there would be much working at cross purposes, and much energy would be wasted because each tried to do that which he was not well situated for doing, while neglecting the work which he was well situated for doing.

In conclusion, it is pretty clear that, as a general rule, a community in which each individual works effectively, looking after those interests which he can look after most successfully and with least waste of effort, is better than one in which each individual works ineffectively, trying to look after interests which he can look after less successfully and with greater waste of effort. Since each individual knows his own interests and

the interests of those nearest him better than he knows the interests of those farther away, we must justify at least a moderate amount of self-preference, or self-centered appreciation of the interests of others. But it is difficult to tell just how far this rule should be carried. When communication and transportation were very difficult, the obstacles in the way of helping people who were a long way off would have made it very wasteful to try to do very much for them. Only one's near neighbors could be helped effectively, and other people outside that circle had to be left to their near neighbors, if they could not look after themselves. Now that the obstacle of distance is not so great it would seem to be economical to widen one's geographical neighborhood somewhat.

Harnessing self-interest to public uses. Law and government can do little or nothing toward eliminating self-interest, even if it were desirable to do so, which it is not; but it is possible to harness it to the good of the nation. Assuming that a man will try hard to promote his own interests and the interests of those nearest to him, it is only necessary to confine his efforts to the field of usefulness or productivity. If he is never allowed to rob, steal, or do any injurious act in trying to promote his own interest, but is told that he will be permitted to do anything useful and receive pay for it or to produce some desirable product and sell it, he will then have a very strong reason for doing useful things or producing desirable objects. If a desirable object is produced, not because the producer has a benevolent interest in the consumer but because he has a selfish interest in the price which he can get for it, it will do the consumer just as much good as though it were produced for benevolent reasons. When everyone is driven by self-interest to produce as much as he can or to render as good service as he can, there will be a great deal produced and much good service rendered. Therefore, even if one did not approve of any degree of self-interest whatever, one might consistently admit that the law was making the very best of a bad situation by thus harnessing that powerful motive to useful service and productive work. Seeing

that the law could not possibly transform self-interested persons into benevolent persons, the next best thing would certainly be to hedge them about so as to make it impossible for them to pursue their own self-interest in any except useful and productive lines.

No visible harmony of human interests. This does not assume that there is any such thing as a natural harmony of human interests. If anything is clear it is that human interests are frequently in conflict. Unless there is an umpire or a tribunal to decide these questions of conflict, an overdeveloped self-interest will frequently drive men into actual conflict or lead one to do something in his own interest which would be injurious to others. It is one of the functions of law and government to adjudicate these conflicts and also to forbid, with suitable penalties, any injurious act. When the laws are intelligently framed and rigidly executed this leaves the individual no choice. However self-interested he may be, and however indifferent he may be to the interests of others, he must seek his self-interest by useful rather than by injurious acts. When he is thus efficiently controlled the more intense his self-interest becomes, and the more intense his interest in his family or near friends, the more intensely he will strive to do useful things, not because he wants to be useful but because he wants the reward of usefulness. To harness this powerful motive of self-interest to the kinds of work which benefit the nation—which increase wealth and prosperity—is like harnessing a great natural force like steam or electricity. In the one case the harness consists of laws and regulations; in the other it consists of mechanical devices.

It has been shown above that all desires are satiable and that they are self-centered. It is necessary to understand both these facts before we can go very far in our study of economics. But what of desire itself? What does it mean to the economist and what is its economic function?

Desire a symptom of dependence. A desire for a physical object is a symptom of the dependence of the organism upon

something outside itself. This dependence may be of various kinds and degrees. The organism may depend upon something outside itself for its life, well-being, or comfort, or merely for its pleasure, convenience, or amusement. An unsatisfied desire is a symptom of a lack, in the time and place where the desire is felt, of something upon which the organism depends. The complete satisfaction or satiation of a desire is a symptom of the sufficient abundance, but not superabundance, of the object of the desire. When the object is too abundant it may become an object not of desire but of repugnance, even though in smaller quantities the same thing would be an object of strong desire. The timber which once stood on the farmer's land and had to be cleared away before he could grow crops will serve as an example of superabundance. Timber in almost any modern community, where it is needed for fuel and for building purposes, will serve as an example of scarcity.

The complete satisfaction of all desires whatsoever, if such a condition can be imagined, would be a symptom of the sufficient abundance of everything upon which the organism depended in any way or in any degree. Such a condition would be one of complete adaptation, a complete harmony between the organism and its material environment.

The two roads to harmony. In the direction of that state of harmony two roads lie open—for a little way at least. No one knows how far they lead. One road is known in the Orient as the Way of Nirvana, or emancipation from craving. By the eradication of all craving from our minds, if that could be accomplished, we should certainly reach a state wherein there would be no dependence upon, or scarcity of, things outside ourselves. We know that we can travel this road for a little way; that is, we can discipline ourselves in the virtues of the simple life, and we can learn to like certain things whereof nature is bounteous, such as air, sunlight, and the clouds, the green of the fields and the blue of the sky, and we can learn to think less of those things whereof nature is niggardly in her supply, such as objects of ostentatious display, luxury, and

pride. This would reduce somewhat our feeling of dependence upon objects outside ourselves, or at least it would reduce our sense of irritation at the everlasting scarcity of the things upon which our happiness seems now to depend. But that we can eradicate all desire scarcely seems possible.

The way of labor. The other road is the way of labor. They who follow this road, instead of eradicating or repressing their desires, labor to increase the abundance of whatever objects they happen, for any reason, to desire, provided, of course, nature has not already supplied them in sufficient abundance when and where they are desired. They also labor to decrease the supply of whatever objects happen, for any reason, to arouse their repugnance. We occidentals generally prefer the way of labor, and we are very certain that we can travel it for a little way. Perhaps the oriental mind, wearying of the everlasting struggle of population against scarcity and not being gifted with our mechanical ingenuity, despaired of making much progress in this direction and turned to Nirvana as the more hopeful alternative. We occidentals have not yet begun to suspect that there is any limit to our possible progress in production, therefore we are not yet ready to forsake it for the road to Nirvana. The Occident, with its mechanical ingenuity and its love of strenuous action, finds it easier to increase its production than to control its desires or to emancipate itself from craving.

The restless effort of body and mind to produce everything we desire is the dominant fact in the economic life of Western nations. It also dominates, though in less degree, the economic life of the Eastern world. The philosophic doctrine of Nirvana is little more than a protest against it. The pursuit of the means of satisfying desire is the all but universal occupation. The great mass of people everywhere are driven by their unsatisfied desires. These are the great motive forces in all human activity. A completely satisfied or satiated desire ceases to be a motive force, ceases to cause men to act. A state of universal and complete satisfaction might be a blissful state, but it would not be

an active state unless, indeed, the chief desire were for action itself. Unless that were the chief desire there would not be much going on.

Human activity determined by desire. Not only must we look for the springs of human action in the unsatisfied desires of men, but we must also expect to find that the direction of men's activities is determined by the character of their desires and that the intensity of their action is determined by the degree of unsatisfaction in which the desires are found. The expression "degree of unsatisfaction" is a more accurate way of saying what is sometimes meant by the "intensity of desire." When a desire is completely satisfied it has no intensity; it ceases to exist as a motive force. When it falls short of complete satisfaction it has some degree of intensity, and the further it falls short the more intense it becomes. Therefore it is important that we understand the nature of our desires, especially those which are normally unsatisfied. Before we can get very far in the study of economic activities we must understand what it is all about. It is concerned with the satisfaction of those desires which are normally unsatisfied, which can be satisfied only through some conscious effort. Literally, that is what it is all about.

To sum up, we find that desire (that is, unsatisfied desire) is, first, a symptom of the fact that something is lacking in the adjustment of man to nature, or that something needs improving in the relation of man to his surroundings; second, it furnishes a motive for action in overcoming the lack or effecting the improvement. The fact that desires are satiable indicates that the imperfect adjustment of man to nature may be improved and perfected by increasing the supply of the thing desired. The fact that desires are self-centered makes it pretty certain that our activities will be a little more strenuous in the satisfaction of our own desires and the desires of those who are, in some sense, "near" to us, than in the satisfaction of the desires of other beings. These facts give direction and character to most of our economic activities.

CHAPTER III

ECONOMIC GOODS

MATERIAL OBJECTS
- Objects of repugnance (Nuisances or "Illth")
  - Harmful to man
  - Useful but superabundant
- Objects of indifference
  - Useless but not harmful
  - Useful but sufficient (free goods)
- Objects of desire (Economic Goods, or Wealth): Useful *and* scarce

The physical objects with which we are surrounded may be grouped under three classes according as our attitude toward them is one of repugnance, indifference, or desire. In other words, they are either objects of repugnance, objects of indifference, or objects of desire.

Objects of repugnance. Objects of repugnance include not only those few things which are always and everywhere thought to be harmful but also a much larger number of things which are, under certain circumstances, useful but, under other circumstances, become harmful because of their superabundance. Nothing, for example, could be more useful than water, but too much water, especially in our cellars or in swampy land, becomes an object of active repugnance. We work as hard to get rid of the surplus when there is too much as we do to get a larger supply when there is not enough. Many of the weeds in the farmer's fields have some uses, but they are so abundant as to interfere with the farmer's crops and are therefore nuisances.

Free goods. There are not many things that are always and everywhere objects of indifference or that are never either useful or harmful. There are a good many things that are objects of indifference merely because they are, in the circumstances of time and place, amply sufficient for all our needs, but not so

abundant as to do us any harm. Air is the most familiar example of this kind of sufficiency. In many places there is enough water, but not so much as to cause us any annoyance. Wherever this kind of sufficiency is found we are found to be indifferent toward the sufficient object. There is no good reason why we should pay much attention to things of this class. We are interested in improving our condition. If a given thing is sufficient for all our needs and not so abundant as to bother us in any way, our condition with respect to that thing cannot be improved. It would be economical of our time and strength to reserve them for improving conditions that need improving. Our indifference toward things that need no improving is, therefore, a means of economizing our time and strength and enables us to apply ourselves to those things that are either too abundant or not abundant enough for our highest well-being.

Economic goods. While we must obviously give a good deal of attention to objects of repugnance and try to thin them out, or reduce their supply, our chief concern nowadays is with objects of desire, or objects of which we desire more than we have. Those peoples who have gained very little control over nature and who are therefore living under savage surroundings were much more concerned with objects of repugnance than we are. We are still, however, actively combating weeds, parasites, disease germs, etc., in spite of the fact that our chief activity is the pursuit of objects of desire rather than fighting objects of repugnance. The problem of getting more than we have of certain scarce things is the problem of income, of production, and, in a very large sense, of human adaptation.

What are economic goods? Before we can go very far in our study of income and expenditure, or of production and consumption, we must get a fairly clear idea as to the sort of things that make up income, or the sort of things that men try to produce. When it was stated in the first chapter that the necessity for economy arose out of the fact of scarcity, it might have been guessed at once that scarcity has a great deal to do with our concept of wealth and with our efforts to produce it.

More accurately, perhaps, we should say that the only things we try to produce are the things of which we do not have enough. It may sound a little queer at first for one to say that his income consists of things that are scarce, or things of which he does not have enough. It will, therefore, be necessary to spend some time in making this point absolutely clear, otherwise we shall never be free from error and confusion. As a matter of fact, the very first step toward a true understanding of the nature of wealth is a clear perception that wealth in the economic sense consists of things that are scarce and for that reason need to be economized. When it is said that the necessity for economy grows out of scarcity and that we try to produce only the things that are scarce, we do not imply that everything is scarce. Some very useful things are very abundant—so abundant that everyone can have all he wants; and when he gets all he wants no one else is deprived of anything that he wants. Such things do not have to be economized, hence they are not economic goods. In fact, so long as they are sufficiently abundant they give us no concern, but when they become scarce we spend our time in trying to get more. Only those things are economic goods which have to be economized; that is, which are scarce, or of which we do not have as much as we should like.

Two meanings of "wealth." Now the word "wealth" has two meanings. In the first place, it is the collective name for all economic goods, or for all goods that have to be economized; that is, for goods that are scarce. In the second place, it is the name of a condition or state of being. It comes from the older word "weal," which means very much the same as "well-being." These two meanings, while apparently different, are yet very closely related. The condition of well-being which we call wealth depends upon the possession of an adequate supply of those things which we call wealth; that is, the things which are ordinarily scarce and which have to be economized. He who lacks an adequate supply is poor; he who possesses an adequate

supply is rich or in a state of wealth. In short, those economic goods called wealth are the goods upon which weal, or well-being, depends. Well-being is increased when these goods are increased or economized; well-being is decreased when these goods are decreased or wasted.

How well-being depends upon wealth. It could not be said of anything which is not scarce that our well-being increases when we have more of it and decreases when we have less of it. There is such an abundance of air, for example, under ordinary circumstances, that no one would be any better off than he is now if the supply of air could be increased, nor would anyone be any worse off if the supply of air were slightly decreased. In other words, no one's well-being depends upon *more* air, even if it could be produced. If, however, air were so scarce that there was not enough to go around, then not only would it need to be economized very carefully but there would be some advantage in producing more of it. The weal, or well-being, of mankind would be improved in proportion as more air could be produced; mankind would be injured in proportion as air was wasted or destroyed. While, therefore, we can say that air is a necessity in a certain absolute sense, yet in a practical economic sense we cannot say that anyone would be better off if more air were produced or if it were even wisely economized; nor can we say that anyone would be worse off if a little air were destroyed or wasted. There would still be enough to satisfy everybody. That is why air, though an absolute necessity, is not an economic good. We should gain nothing by trying to increase the supply or to economize in the use of the existing supply. Since we do not gain anything by economizing it, it is not an economic good. Where abnormal circumstances arise, in which there is not enough air, then it has to be economized and becomes at that particular time and place an economic good. If such circumstances could last, air would become wealth in the same sense that food, clothing, fuel, and certain other things are now wealth. It would then be true of

air, as of these other things, that well-being could be increased by producing or economizing air and decreased by destroying it, wasting it, or otherwise making it scarcer.

The question of having more or having less. Water is another illustration; perhaps a better one, because there are many places where water is so abundant that it does not have to be economized at all, while there are other places where it is so scarce that it has to be economized very carefully indeed. In the former places water is not wealth; in the latter it is. In the former no one labors to secure any more; in the latter they do. In the former no one would be better off if there were more water; in the latter some people would be better off. In the former well-being does not depend upon a little more or a little less water; in the latter it does. In the former there is no occasion for economizing water; in the latter it is very important that it be economized and made to go as far as possible. In the former the formula "more water, greater well-being; less water, less well-being" is not true; in the latter it is true. This is the test in every time and place as to whether water is wealth or not. All that has been said of water may be said of anything else. The same test must be applied to determine whether it is wealth or not. As a matter of fact, water, like a great many other things, is sometimes too abundant,—so abundant that men find it to their advantage to go to considerable pains in order to get rid of some of it or to lessen the supply. In such cases it may be called *illth*.

Relation of value to economic goods. We have gone to considerable pains to point out that one characteristic of economic goods is that they are always scarce. It is this which gives them the power to induce men to work and to economize. Another characteristic is that they all have value or power in exchange. The power to command other desirable things in peaceful and voluntary exchange—that is, value—is very much the same as the power to induce men to work. That is to say, the thing which possesses one kind of power will always possess the other, if indeed it be not incorrect to speak of them as different kinds

of power. The object which possesses this power to appeal to human motives in such a way as to induce men either to give up some desirable object in exchange for it or to labor in order to produce it is always said to be valuable. This power depends in all cases upon the scarcity or insufficiency of the existing supply of the object in question. This simply amounts to the truism that a thing would not possess this power unless someone could be found who wanted more of it than he had. If a person or a considerable number of persons can be found who want more than they have, there will be someone who will give up something in order to get more or who will work in order to produce more. These things, again, are economic goods, or wealth. Since, as we have just shown, they all possess value, it amounts to the same thing to say that wealth consists of things that have value. In short, such words as "wealth," "value," "economic goods," and "economy" all center around the one great fact of scarcity; that is, the insufficiency of certain things at certain times and places to satisfy desires. Out of this great fact grow also such ideas as property, industry, and foresight. No one wants to secure property rights, for example, in anything of which everybody has enough. But when anyone fears that there may not be enough of a certain thing to go around, and that he may, therefore, be left out, he naturally wants to guard against that calamity by getting possession of a supply. He will try to get possession of a supply either by producing it himself or by buying it of someone else, and he will try to guard his treasure carefully. When the state steps in and undertakes to protect him in his possession, he has then secured a property right in the thing in question. Again, productive industry, as already shown, is directed toward alleviating scarcity or increasing the supply of something of which the supply would otherwise be insufficient. Frugality and foresight are exercised to provide against scarcity.

Meaning of scarcity. Now scarcity means nothing except insufficiency in a given time and place to satisfy the desires which exist in that time and place. It does not mean rarity,

because, no matter how rare a thing may be, if there is as much as is wanted it is not scarce; and no matter how great the total quantity, if there is less than is wanted it is insufficient, or scarce. And it is always well to bear in mind that a thing is scarce, if at all, because the available quantity *in a given time and place* is insufficient. No matter how much water there may be in the Mississippi River, it does not alter the fact that water is scarce a few hundred miles to the westward; no matter how much copper there may be in the bowels of the earth, it does not alter the fact that there is less copper in available form than is needed on the surface. It is this fact which induces men to labor to move things from one place to another.

Mistaken valuations. Before proceeding farther it is necessary to make one important qualification—men do not always know upon what their weal, or well-being, depends. If they are mistaken on any phase of this question, they will be placing a high value upon some things that are not good for them and a low value or no value at all upon some things that are good for them. They are poor economizers who do this, but there are many poor economizers in the world. This is the same as saying that they will sometimes desire more of a thing than they have when they really have too much already, or less than they have when they really have too little already. With this qualification in view, all we can say is that men will *regard* as wealth everything upon which they think their well-being depends in the practical economic sense described above. That is, if they *think* they need more than they have, they will strive to get more, either by offering something for it, thus giving it a market value, or by trying to produce it, thus creating an industry. This explains why it is that the student of economics is sometimes compelled to include among economic goods, or wealth, articles which he himself would not use or which he regards as deleterious, such as opium, alcoholic drinks, or tobacco.

Importance of desiring the right things. Teaching or persuading people to want the right things has commonly been regarded as the work of the educator and the preacher rather

than the economist. The latter has not generally undertaken to pass judgment on the wants of the people. He has assumed, rather, that his work was done when he had shown how such wants as the people happen to have are satisfied and may be satisfied more and more fully. But no one who really has at heart the welfare of the people can be indifferent to the quality of their wants or desires. What men want most they will try hardest to get; the character of their wants or desires, rather than their real needs, will therefore determine the character of their industries and their government. But, more important than that, if their desires are opposed to their needs (that is, if they desire things that are harmful to them, then the more efficient their system of production becomes the more harm they will do themselves. In that case an efficient industrial system promotes national deterioration rather than national well-being. If one were to make a study of the wreckage of nations, one would probably find that more had gone to pieces because their wants were wrong than because they were not able to supply their wants. That is one reason why, as stated earlier in this chapter, the subject of consumption is of such tremendous importance.

Necessity of economizing means of production. Thus far in discussing the necessity for economy we have been considering the means of satisfying our wants directly. But we must consider also the necessity of economizing the indirect means of satisfying wants. In the effort to overcome scarcity (that is, in the production of goods) it is necessary to make use of various factors of production, such as labor, tools, raw materials, etc. These also are scarce and have to be economized. To be sure, many things that are essential to production are not scarce. These are not considered as factors of production; that is, they are not *economic* factors of production at all. Carbon dioxide is just as essential to the growing of plants as nitrogen, phosphorus, or potash, but there is plenty of carbon dioxide in the air, whereas in most soils nitrogen, phosphorus, and potash are scarce or tending to become scarce. Therefore these three substances are considered as factors (that is, economic factors) in

plant growth. Applying the same formula here as we did to other things earlier in this discussion, the average farmer can say, and say truly, "More nitrogen, more plant growth; less nitrogen, less plant growth." Therefore agricultural production is increased by increasing the nitrogen in the soil. The same may be said of phosphorus and potash, but the formula does not apply to carbon dioxide. This is a principle of the very greatest importance, as will be seen later. Some of the greatest problems in economics and social justice depend upon this formula and are incapable of solution without it.

Why a thing has value. The fact that desirability and scarcity, and these alone, give value to a thing is perhaps clearly enough established by this time. Few will care to question the statement that not only must men desire a thing, but they must desire more than they have before they will strive to get more either by purchasing it or by producing it. Moreover, this is as true of a factor used in production, such as tools, as of an article of direct consumption, such as bread. It may not be quite so obvious, but it is none the less true, that this is also one of the great sources of that conflict of human interests which gives rise to most of our problems of justice and equity. This will be discussed in the next chapter.

TEN CHARACTERISTICS OF ECONOMIC GOODS, OR WEALTH

1. They are scarce; that is, there is less of them than is wanted.
2. They have to be economized.
3. Well-being is thought to increase as they increase and to decrease as they decrease.
4. Men labor to produce them; that is, to make them less scarce.
5. Men try to secure them by purchase.
6. They have value, or power in exchange.
7. They become the subject of property rights.
8. Wise men exercise frugality and foresight with respect to them.
9. There is a conflict of interests among men with regard to them, because there is not enough of them to go around and satisfy everybody.
10. They give rise to questions of justice and equity.

CHAPTER IV

ECONOMIC ACTIVITIES

The purpose of our economic activities is to satisfy our economic desires. In Chapter II the chief of these were classified as (1) desire for action, (2) desire for esteem, and (3) desire for material goods. Our economic activities may be classified correspondingly as (1) pleasurable activities, (2) activities designed to win the esteem of other beings, and (3) acquisitive activities.

Play. Pleasurable activities might be said to include the whole field of play, sport, and recreation, but we should be careful to exclude those forms of amusement or entertainment in which most of us remain as idle spectators while others are paid to amuse or entertain us. We should then include only those activities which the participants themselves enjoy so much as to require no other reward or incentive than the pleasure of participation.

Activities designed to win the esteem of other beings include a great deal of our polite social intercourse and some of our religious ceremonialism. Acquisitive activities, however, include most of our industrial and business life. There is usually, however, a mixture of motives, as indicated in our discussion of economic desires in Chapter II.

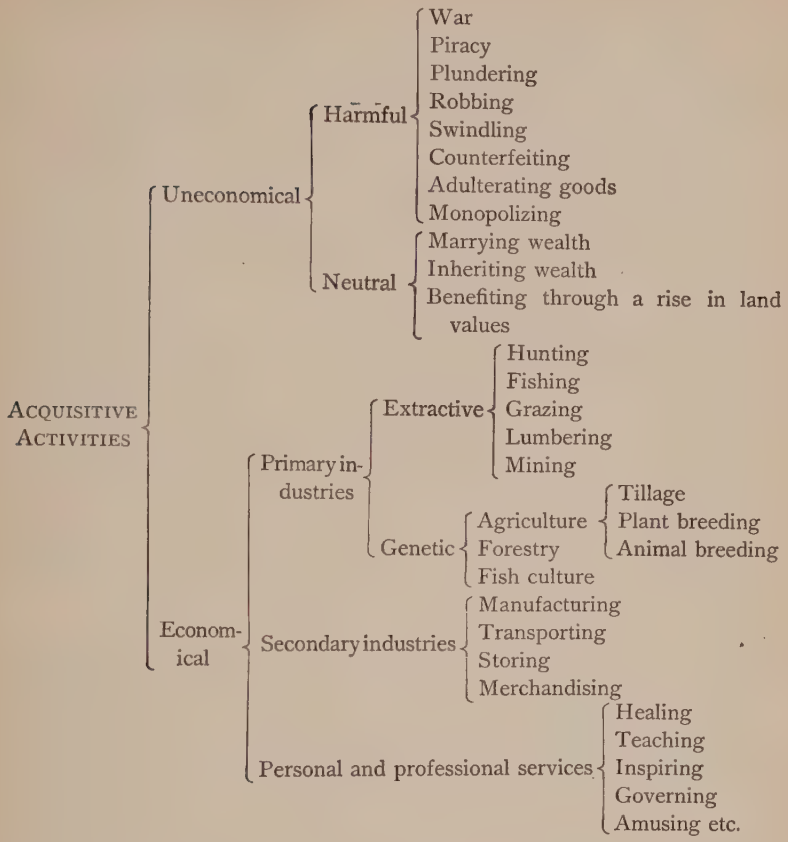
Pleasurable activities play a large part in the economic life of most nations, especially of those which are distinguished for their energy and strenuosity. Hunting and fishing for sport, gardening, poultry-raising for pleasure, much literary and artistic work, and a number of other avocations are carried on by persons whose chief or sole motive is in the pleasure of action. Besides, larger numbers of people spend considerable time in games and sports which have no productive end beyond the

pleasure of action. They derive a considerable part of the joy of living from these exercises rather than from the consumption of material goods. As material wealth increases, through improved and easier methods of production, more and more time is spent in pleasurable activities and less in activities that are purely acquisitive.

If we could all make a living by playing! If we could imagine a condition under which all that heart could desire in the way of material goods was freely provided, men would not have to do anything except what they liked to do. There would doubtless be much strenuous action, but it would take the form of play. However, so long as any class or classes of material goods are scarce, it will be necessary that work be done the chief motive of which is the desire for material goods rather than the pleasure of action. This contrast between doing what we enjoy and doing what is necessary to provide the material necessaries of life is well brought out in the old fable of the grasshopper and the ant. The grasshopper, it will be remembered, had spent the summer in pleasurable, the ant in acquisitive, activity. When winter came the grasshopper learned that these acquisitive activities had their compensations even though they may not be so very pleasant.

Acquisitive activities. Though acquisitive activities all have the common motive of the desire for material wealth, they are, nevertheless, of many kinds, some being predatory, some merely acquisitive, and some productive or useful. It is obvious that it makes a great deal of difference to the prosperity of the nation how its citizens generally acquire their wealth. The following outline attempts to classify the acquisitive activities of individuals according as they subtract from or add to the national prosperity.

Ways of acquiring wealth. In the diagram on the following page the ways of acquiring wealth are divided into two main classes,—the uneconomical and the economical. From the social or national point of view it is uneconomical to have men acquiring wealth by methods which do not add to the total



wealth or well-being of the society or the nation. When one man gains something by plundering, swindling, counterfeiting, or monopolizing, someone else loses a like amount and nothing is added to the total. In fact, if these harmful methods become general they are likely to discourage honest industry and actually to diminish the total production of wealth. Even the neutral methods may become harmful if they result in wasted lives; that is, if they enable men and women who would otherwise be productive and useful to live in idleness and luxury. The smaller the proportion of the people who live by means of

the uneconomical methods the more prosperous the nation is likely to become.

Economical ways of getting a living. By the economical ways of acquiring wealth are meant all those ways by which an individual contributes to the wealth of the whole community as much as he gets. He may make his contribution by laboring either to produce commodities or to render direct service to some of his fellow men. In either case, where he gives honest service for honest pay he is enriching someone else in proportion as he is himself enriched. A nation in which this rule prevails universally, where everyone is contributing to the well-being of someone else in exact proportion as he himself prospers, has at least one of the conditions of general prosperity. If each one is capable and well trained, so that he can give efficient service (that is, if he contributes largely to the prosperity and well-being of someone else), then everyone is prosperous, which is the same as saying that the nation as a whole is prosperous.

Primary industries. The economical ways of getting a living are subdivided into three classes: first, the primary industries; second, the secondary industries; and, third, professional and personal service. The primary industries are those which produce commodities directly from their original and natural source,—which take material as nature provides it and appropriate it to some human use or change it from a form which is nonusable to a form which is either usable or one stage nearer to usableness. For example, the elements which produce plant growth are not, in their natural state, available for human use. The farming industry converts these elements into something which is either usable, as in the case of fruits and vegetables, or at least one stage on its way toward usableness, as in the case of grain or live stock. The mining industry brings the crude ore, which is not usable, into a condition where it is either usable or at least one stage nearer usability.

Secondary industries. The secondary industries are those which take the products of the primary industries which are

in need of further modification and carry them through the remaining stages on their way to final usability. The iron ore, for example, must be worked over many times before it becomes an automobile or the blade of a pocketknife. The coal must sometimes be transported long distances before it can warm our houses. The farmer's grain, besides being transported long distances from places where there is a surplus to other places where there is a shortage, must also be stored from threshing time until it is needed by the consumers, and it must be ground into flour and baked into bread or manufactured into some other form of food before it is ready for use.

Services. Personal and professional services include all lines of work which do not directly produce salable commodities. Lawyers, doctors, preachers, teachers, actors, barbers, and even policemen and congressmen, besides multitudes of others, are performing professional and personal services. Their labor has sometimes been called unproductive labor, merely on the ground that it does not produce vendible commodities. Though the writers who apply that term to them do not mean to cast any reflection upon them, always being careful to state that "unproductive" does not mean useless, nevertheless it seems better to avoid the use of a term which is so easily misunderstood. The important distinction is not that between productive and unproductive labor but between the economical and uneconomical ways of acquiring wealth. Even though the labor of the policeman does not directly produce a commodity, as the labor of a shoemaker does, for example, nevertheless the shoemaker and every other honest worker is helped to work better by the law and order which a good police system helps to support. They are helped also by the physician, the teacher, and others who labor in the field of direct professional service. There is an ancient story of some musicians who formed a part of a captured army. They requested that they be set free by their captors, on the ground that they had not taken part in the fighting. The captors replied, "By your music you inspired others to fight; therefore you must be treated as though you were your-

selves fighters." By a similar line of reasoning it could be said that if musicians inspire others to work, they are themselves workers and are contributing their part toward the national prosperity. Any of these economic activities may be carried on either competitively or coöperatively. The basis of competition is found in the conflicting desires of mankind, and these desires come into conflict mainly because of scarcity.

Honorable activities. It has been suggested already that certain activities may be both pleasurable and productive. It should be added that they may also be highly honorable and bring a great deal of social esteem to the producers. In fact, the highest prosperity can never be achieved by any nation that does not manage to make productive action both pleasurable and honorable. If the three classes of activity are always sharply distinguished and never combined, the nation will always be poor.

If, for example, all genuinely productive work should be held in low esteem by the people, and if their habits of mind were such as to make it impossible for them to derive any pleasure from productive work, they would always suffer from a dearth of material goods. No one would then do productive work except under the stress of want or the motive of greed. But if productive work is held in high esteem, and if the habits of mind of the people are such as to enable them to derive a great deal of their pleasure from productive work, it is certain that a great deal of productive work will be done. Men will not need to spend so much time in mere self-enjoyment, because they will get a certain amount of enjoyment from their productive work; neither will they be tempted to abandon productive work in order to win esteem or popularity in other ways. In short, they will have three motives to work, instead of one, and will work harder, produce more goods, win more esteem, and have a better time in consequence.

Attitude toward work. One of the most important differences between the prosperous and the unprosperous nations is found in this attitude toward work. The unprosperous nations are

generally found to have many holidays and to spend a great deal of their time and energy amusing themselves in unproductive ways. It seems logical to them to do so and illogical to work when they might enjoy themselves. It does not seem to occur to them that there can be such a thing as enjoying work. Any nation that has ever grown really prosperous has had, at least in its days of growth, many working days and few holidays, has managed to take a great deal of joy and pride in work, and work has been held in high esteem.

Even in the most industrious nations there are always demoralizing tendencies. One result of prosperity is to make people desire more expensive amusements as well as more costly goods. There is a tendency to multiply holidays, shorten the working day, the working week, or the working lifetime, and, in general, to turn from work to other things for pleasure.

Joy in work. Why work longer when we have goods enough, is a common question. If one is so constituted as to be unable to see that work may itself be a pleasure, there is no answer that will satisfy him. What he needs is not argument but a change of heart,—a new outlook on life, a new sense of value. Until he can be made to feel pleasure in work no reasoning will convince him.

Men who do not feel pleasure in work will naturally, as soon as they are prosperous enough, work less and spend more time in pleasurable but nonproductive activities. Having builded their barns larger and filled them with good things, they will say, "Soul, thou hast much goods laid up for many years; take thine ease, eat, drink, and be merry"; that is, they will lose their souls. But men who can and do take pleasure in their work behave in a very different way. It makes a vast difference in the prosperity of a nation whether its citizens generally behave in the one way or the other. If they generally stop producing as soon as they have their barns full, the prosperity of the country is limited by that fact; but there is no conceivable limit to the prosperity of a people who enjoy their work.

Preferring the other man's work. Another demoralizing tendency is that of disliking one's own work and imagining that some other kind of work would be much pleasanter. They who have to do work requiring great discretion sometimes grow weary of thinking perpetually about one puzzling question after another and imagine that they would enjoy routine work that did not require much thinking, while those who grow weary of routine work imagine that they would enjoy work that required hard thinking. They who have to carry heavy responsibilities imagine that they would enjoy work that involved no responsibility, while those who carry little responsibility long for more. Sentimentalists sometimes excuse themselves and others for disliking their work by contrasting it with what they style creative work. This term has never been satisfactorily defined and probably means little more than pleasant work, and to use it in this sense is to beg the question. All productive work is creative in the best sense.

Quite as demoralizing as the tendency to separate all work from all pleasure, or to regard all work as irksome rather than pleasant, is the tendency to separate estimable from productive work. This tendency shows itself wherever productive effort is held in low esteem and other activities in high esteem. There have been men who have won a certain kind of applause by boasting that what they were doing was of no use to anybody. It is not uncommon to speak disparagingly of mere business or industry as contrasted with some of the ornamental callings, and of those who produce the goods which we like to consume as mere Philistines. With the best of intentions, even certain kinds of highly useful work are sometimes called social service to distinguish them from other kinds of useful work, to the disparagement of the latter. Some kinds of work may be more productive than others, but all productive work is social service, and there ought not to be any such distinction.

Social service. Probably the highest form of social service is found in the ordinary productive business enterprise, though it is not, of course, the only form. If we assume that people

know what they need, it is seldom necessary to call upon philanthropy to provide for their needs. Business or politics will supply them quite as effectively as philanthropy possibly could. In those cases, however, where people do not know their own needs neither business nor politics will supply them, for the reason that people will neither pay the business man nor vote for the politician who attempts to supply them; nor will they show esteem for the person who tries to do for them that which they do not desire to have done. If such needs are supplied at all, they must be supplied on a philanthropic basis by people who do not expect either money, votes, or social esteem for their work.

The following outline will show with a fair degree of clearness the dividing line between philanthropic service and nonphilanthropic service.

THE FIELD OF SERVICE
- In which the people's desires are opposed to their needs
  - Desires, supplied by: Business; Politics
  - Needs, supplied by philanthropy, there being no effective demand
- In which the people's desires are the same as their needs
  - Desires
  - Needs
  - Both supplied by: Business; Politics; Philanthropy

Philanthropic service. If people do not know what they really need, and you happen to know better than they, you will have two widely different opportunities before you—one in the field of business or politics and the other in the field of philanthropy. On the one hand, you may look at the problem as a business man or a politician would. You discover that the people have certain desires for which they demand the means of satisfaction. As a business man or a politician you need not inquire whether they ought to have the things they desire or not. You will realize that they will pay for these things or that they will vote for the politician who supplies them, even though they receive harm from what they get. On the other hand, you may approach the problem as a philanthropist and

attempt to give the people what they really need rather than what they desire. The people will not pay you for your service, they may even resent it; nevertheless you will be rendering them a real service.

Nonphilanthropic service. If, however, the people really know what they need (that is, if their desires are the same as their needs), then it will not make much difference whether you are a business man, a politician, or a philanthropist; you will do much the same thing in either case. Since they desire what they need, you can prosper as a business man by supplying their needs. You can prosper as a politician also, but in either case you will do the same for the people that you would if you were a philanthropist and cared nothing for either money or votes and were actuated solely by good-will and benevolence.

The large principle involved here is simply that when people know what they need, business and politics, as well as philanthropy, may supply those needs. When, however, their needs are opposed to their desires, business and politics are both very different from philanthropy. In this case neither business nor politics can properly be called social service, only philanthropy is really and genuinely serviceable. Generally speaking, however, it is probable that men can be trusted to know their own needs. In so far as this is true, business and politics are just as serviceable as philanthropy and deserve quite as well the name of social service as any kind of philanthropy.

Where men know their own needs. Let us consider rather carefully the field of service wherein needs and desires coincide. This is the field of worthy business enterprise and of constructive politics. In this field the selfish business man and politician will do very much the same things that a philanthropist would do, the only difference being that the business man or the politician may accept a reward in the form of money or votes, whereas the philanthropist would not.

Suppose you are a pure philanthropist with no selfish motive whatsoever and are looking about for an opportunity to be of service to your fellow men, but you have chosen some

form of service which consists in supplying needs of which the people are fully conscious and appreciative. The market demand will be a pretty good indication as to what people need. It will indicate where the most pressing need is and where there is the greatest scarcity of service. As a philanthropist, you should seek to perform some service of which there is a pressing need because of its scarcity, rather than to perform some service for which there is no pressing need because of its abundance. If you find, for example, that the supply of farmers, relative to the demand, is small, and that the supply of servants in any other field which you are capable of entering is pretty well supplied already (is large), it would then be your duty as a philanthropist to become a farmer rather than to enter one of the other occupations. If, having become a farmer, you find that certain crops are already well supplied, so well supplied that there is no pressing need for a larger supply, but that there is one crop which is undersupplied, so much so that there is a pressing need for more, as a philanthropist you should grow this crop which is scarce. It will be noticed, however, that in making these two choices you will be choosing exactly as a business man would who was seeking, not philanthropy, but profit.

Where men are most needed. Again, if you were to decide to go into a highly organized industry which required a great many different kinds of skill or talent, ranging all the way from unskilled muscular labor up to the higher forms of business management, you would have a new problem,—that of choosing the kind of work which you would do or the kind of skill which you would develop. If you had it in your power to do any of the many kinds of work required, you would, as a philanthropist, choose the one in which men were most scarce rather than any kind of work for which there were already plenty of men. Or, if your talents were such as to enable you to choose among any two or three kinds of work, you would have to choose in the same way. As a philanthropist you would have to enter on that occupation in which there

was the most pressing need for more men. In this case, however, your choice as a philanthropist would be identical with your choice if you were not a philanthropist but were looking for the highest possible wages or salary.

If, however, you made a different choice, you would not be a good social servant, or you would not be performing your maximum social service. If there is one kind of work for which there are already a great many men available, the question of one man more or less in that occupation would make very little difference. Your contribution to the total production would be very slight if you crowded into that already overcrowded occupation; in fact, your contribution might be nil, because you might merely crowd out another man. Your only opportunity for genuine service would be to find an occupation so undercrowded as to make it very important that more men should enter it. If you enter such an occupation, you will be doing vastly more for the community or for the industry than if you enter an occupation where you are not very much needed because of the existing oversupply of labor.

Even after you have decided to enter an occupation where you are very much needed, you still have another problem before you. Will you contribute your services gratuitously or will you accept the high wages offered? Even as a philanthropist it is by no means certain that you should work gratuitously. It is quite possible that you could do more good by accepting the high wages and using the money in some other way than by working gratuitously. On the whole, it would probably be a safer kind of philanthropy for you to accept whatever wages your work would bring and then use your money constructively.

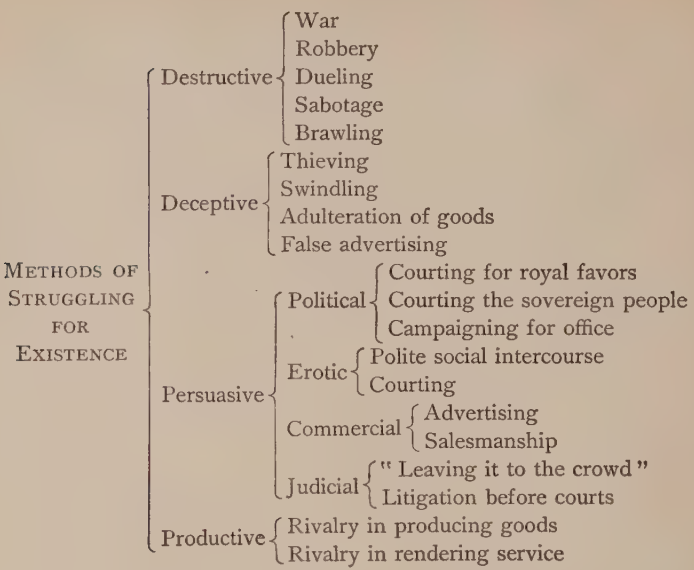
To invest or to give, that is the question. But even after you have accepted your wages you have money to spend constructively; you still have other serious problems. As a philanthropist you can doubtless do some good by spending your money charitably, but that is not the only way in which to do good with money. It may be, and frequently is, better to invest your money in some new industry than to give it away in charity.

If by investing it in a new industry you can build or help to build a new factory which will employ a number of men, it is probably better for those men to be so employed than to receive the money as a gift. Besides, when they are so employed, they will be producing more goods for the rest of the country and tending to make the country more prosperous. The only conditions under which it would be advantageous to give your money away charitably would be when it would take care of people not capable of working in your factory or any other factory, or doing any other kind of productive work. So long as there are such people in the world they will have to be taken care of, and there is room for charitable giving; but for able-bodied people, capable of working, it is much better for them that they be employed in some kind of productive work, and very much better for the rest of the world at the same time.

Because of the great fact of scarcity, it is absolutely certain that human interests and desires will frequently come in conflict. When there is not enough of a certain thing to go around and satisfy everybody, it means that if one person gets all he wants others must necessarily get less than they want. This conflict of interests will give rise to some kind of rivalry, struggle, or competition. What form this struggle will take will depend a great deal upon the laws and regulations of the country and the moral and religious development of the people. The outline on page 60 indicates the chief forms of struggle or of the acquisitive activities.

The struggle for existence. It is a common error to speak of competition as though it were synonymous with war or with the struggle for existence as it is carried on among brutes. That it is a form of conflict there can be no doubt, nor can it be denied that it is a phase of the all-but-universal struggle for existence. But there are many forms of conflict besides war, and there are many ways of struggling for existence without resorting to the destructive methods of brutes.

Various forms of conflict. The methods named in the outline on page 60 may be explained and illustrated as follows: By



destructive methods are meant all those whereby one succeeds by virtue of one's power to kill, to hurt, or to inspire fear of physical injury or pain. "War," "robbery," "dueling," "sabotage," and "brawling" are names for methods of destruction as carried on by human beings; but it must be remembered that animals also kill, rob, inflict injury, and inspire terror. By the deceptive methods are meant all those by which one succeeds by virtue of one's power to deceive, to swindle, or to cheat. Animals practice deceit, though we do not call their forms of deceit by such names as "swindling," "counterfeiting," "adulteration of goods," etc. By the persuasive methods are meant all those methods whereby one succeeds by virtue of one's power to persuade or to convince. One may beat one's rival by being a more persuasive talker, whether one is striving for favors from the sovereign person or from the sovereign people, whether one is striving for the hand of a lady, the decision of a jury, or the trade of a possible customer. This form of conflict would remain even if we could eliminate all other

forms. Even under the most complete form of communism there would remain abundant room for the persuasive forms of conflict. By the productive methods are meant all those methods whereby one may beat one's rivals, or gain advantages, by virtue of one's power to produce, to serve, or to confer benefit.

The same persons may resort to more than one of these methods in order to gain an advantage. When two farmers compete in growing crops they are struggling for existence, or for economic advantage, by a productive method. When they quarrel over a line fence and take their quarrel before a court for adjudication, they are struggling by a persuasive method. When they secretly alter or remove landmarks in order to gain an advantage in their litigation or when they bribe jurors, they are struggling by a deceptive method. When they fall to fighting either with fists or with weapons, they are struggling by a destructive method. When they change their methods in the order just described, they are sinking lower and lower in the scale; that is, they are resorting to worse and worse methods of struggling for existence or advantage. When they rival one another in growing corn, there is more corn grown as the result of that rivalry; the country is better fed and everyone is better off, except possibly the one who is beaten, and even he may very likely be better off than he would have been if he had not competed at all. When two farmers quarrel over a line fence and take the case into court, no one gains any benefit except the lawyers, and what the lawyers gain the litigants lose. No new land is created by that conflict. No new wealth is produced. The community is no better fed, and the litigants have wasted their time. To change from persuasion to deception or from deception to physical force is so clearly to sink to a lower level that it is unnecessary to pursue the topic further.

Destructive and deceptive methods of brutes. It will be apparent to anyone who will study the diagram that among animals the destructive and deceptive methods are the characteristic forms of struggle. They kill, maim, injure, rob, and

deceive one another with no moral or legal restraints. They may sometimes rise to the level of persuasion, as in the courting process, but never to the level of production; that is, no animal ever tries to beat its rival by producing a larger or better product or rendering a greater or better service. Among human beings who have no moral sense and who are unrestrained by law and justice the destructive and deceptive methods of struggle will be followed as well as the persuasive and productive methods, but the destructive and deceptive methods of struggle are precisely the things that morals and laws are designed to prevent. In any civilization worthy of the name and under any government worthy to stand overnight men are actually restrained, by their own moral feelings, by the respect for the good opinions of their fellows, and by the fear of legal penalties, from attempting to promote their own interests by destruction or deception.

Meaning of crime. To say that men are restrained from doing these things is not the same as to say that they are absolutely prevented. "Crime" is the name we give to destructive and deceptive methods of struggling, and it still flourishes, but it must be remembered that what we call crimes for human beings are not crimes for brutes, for the simple reason that brutes have none of those restraints which men throw around themselves. The fact that we call all destructive methods and the more grossly deceptive methods crimes and impose penalties against them shows that we are trying to raise the struggle for existence to a higher plane than that on which it is waged in the subhuman world. The aim is to prevent destruction and deception and to compel men to succeed, if they succeed at all, by persuasion and production. No government, however, is so efficient that it can prevent all destruction or deception. "The mills of *man* grind slowly *and* they grind exceeding *coarse*." Besides, there are some more or less refined methods of deception which have not even been declared illegal by legislation. If we can so improve our legislation as to prohibit every form of deception as well as destruction, and if we can so improve our

executive and judicial systems as to prevent absolutely the violation of law, we shall have reached the ideal of government control over the struggle for existence. To stop productive competition and compel us all to struggle for our own advantage by the persuasive methods would be a distinct step backward.

Is it wrong to compete? There are a few people who object on principle to all forms of competition,—who believe that the whole competitive system is morally wrong. This feeling, however, is probably due to a failure to discriminate, as we have tried to do in the preceding pages, between different kinds of conflict. The horrors of war and other forms of destructive conflict, the petty, skulking meanness which accompanies all forms of deceptive conflict, and even the jealousies and heartburnings which result from many forms of persuasive conflict have so impressed certain sensitive spirits as to cause them to revolt against the very idea of competition in any form. Such people ought never to play croquet, because there is competition even there. An election is as truly competitive as any form of business.

Universality of struggle. During the entire life of man on this planet he has had to struggle in one way or another. The reason why we are here today is because our ancestors were successful in their struggles. They succeeded in living and reproducing their kind in spite of all the enemies and dangers which surrounded them. One reason why they struggled so successfully was that they were valiant enough to wage their fight with vigor and with spirit. That spirit we have inherited to such an extent that we cannot even amuse ourselves without some kind of competition or struggle. It is as the breath of life to our nostrils. It will be well for us if we can harness this spirit to productive work rather than allow it to waste itself in destruction, deception, or even in some fruitless kinds of persuasion. The nation which succeeds best in so harnessing this spirit to production is the nation which should normally grow rapidly in wealth, prosperity, and power.

Again, the great fact of scarcity, together with the fact, pointed out in Chapter II, that we all prefer some people to others, makes some form of competition inevitable and eternal. As pointed out in Chapter II, when there is not enough of a certain thing to go around and satisfy everybody, all those who prefer themselves and their own families to their rivals and their families will struggle to get their share of the scarce article. When there are not enough to the high offices to go around there will be a similar struggle to get them. These facts have always been present in human society and always must remain, from the very nature of man and of the universe in which he finds himself. From the very nature of the case we cannot all be leaders. If we were there would be no followers. We would all rather lead than follow; we would rather command than obey. Therefore we shall always struggle for leadership and command. Nor can there be wealth enough to go around and satisfy everyone. If there were, wealth would cease to exist as wealth. Whenever you find a thing so abundant as that, it has ceased to count as wealth. Only those things are wealth of which we can say that more is better than less. So long as we would rather have more of a certain article than less of it we shall strive to get more. Competition, or struggle, is therefore unavoidable. The thing to do is to make the most of it and to turn it, so far as possible, into productive channels and out of the destructive and deceptive channels.

The spirit in which one competes. In assuming the universality and permanence of competition in some form it is not necessary to exclude such things as love, friendship, neighborliness, and coöperation. Competitors in a friendly game may be none the less friendly because they are competing. It is only when they care more for victory or the prize of victory than they do for friendship that there is any conflict between competition and friendship. The cure for this, however, is not the abolition of competition but the learning to care for the right things and to evaluate things properly. When men care more for money, which is the prize of economic competition, than for

honor, friendship, or justice, then competition is likely to be ruthless and destructive. When men care more for offices, the immediate prizes of political competition, than for the welfare of the country or the peace of the neighborhood, a political campaign is likely to become a ruthless and destructive game. And when football men care more for victory than for sport or honor, football becomes a game unfit for gentlemen. In all these cases the evil does not inhere in competition itself but in the false system of valuations in the minds of the competitors. So long as business men realize that there are other things more precious than money, so long as politicians realize that there are other things more important than winning offices, so long as football men realize that there are other things greater than victory, all these forms of competition are thoroughly compatible with the most sincere friendship.

It has been pointed out many times that the struggle for the life of others is just as real a fact in life as the struggle for the life of self, that mutual aid is as real as mutual antagonism, and that coöperation has a place in our economic system as well as competition. All this is true, but it must not be allowed to obscure the fact that competition is a very real thing also. Behind these apparent contradictions lies the very important fact that human interests are sometimes harmonious and sometimes antagonistic,—that they are never wholly one or the other. Where the interests of men harmonize there is and always will be coöperation, provided they are wise enough to understand it; where their interests conflict, there is and always will be competition.

Coöperation a form of competition. Even coöperation, as it is generally practiced, is only a method of competing more effectively. There is coöperation among the members of an athletic team. Their teamwork consists in working together smoothly and effectively; but the purpose of this teamwork, or coöperation, is to enable them to compete more effectively against the opposing team. It would be difficult to find or to name an instance of coöperation which did not, directly or

indirectly, enable the coöperators to compete more successfully than they were able to do when working alone as individuals. It is really the principle of teamwork applied to business competition. Within the coöperating group, as within the athletic team, competition among members is reduced. But competition between coöperating groups, or between the group and those outside the group, is quite as sharp as it would be if there were no coöperative groups. Again, when a coöperative group becomes large, there arises within the group a certain amount of competition for offices and other advantages.

Coöperation is an excellent thing under certain conditions, and wherever the conditions call for it every reasonable effort should be made to encourage it, but the encouragement should be given with a full understanding of its limitations and of its real relation to the competitive process. More coöperative societies have failed than have succeeded. One of the principal reasons for failure has been that the promoters have imagined that there was in coöperation something inherently superior to competition and that it ought to be substituted for competition anywhere and everywhere. The truth seems to be that coöperation is called for only under certain special conditions where teamwork is required in order to secure large results.

Where coöperation is successful. A careful study of coöperation will show that it has seldom succeeded in the field of production. Its chief successes have been achieved in merchandising; that is, in buying and selling. Except among a few religious societies, which are held together by a powerful religious sentiment, the author does not know of a single case where coöperative farming has succeeded. By coöperative farming is meant the running of the productive work of growing crops under a coöperative system. There are many cases, however, in which groups of farmers have coöperated in buying and selling, in marketing their products, in purchasing their supplies, and in securing capital on advantageous terms. There are also many cases in which they have coöperated in running

creameries, cheese factories, and grain elevators. These are parts of their marketing system. Again, it must be remembered that the farmers do not themselves operate these establishments. They own them and they furnish the capital to run them, but they hire others to manage them and to do the work. The men who work in these establishments are not coöperators, but receive wages and salaries precisely as they would if the establishments were owned by private individuals.

Two fields for business competition. There is a fundamental reason why coöperative enterprises have not flourished in the field of production as often as they have in the field of buying and selling. This reason is found in the two kinds of business competition,—competitive production and competitive bargaining. Competitive production always works well; competitive bargaining sometimes works well and sometimes works badly. Since competitive production always works well, the need for coöperative production is never sufficient to justify its existence. No one has a sufficiently strong motive to induce him to give his time and energy to the running of a coöperative society in the field of production. Since there are no evils connected with competitive production, there is not enough to be gained by coöperative production to lead anyone to sacrifice his time and effort in order to make it succeed.

In the field of competitive bargaining, however, evils frequently spring up. Where a small and compact body of dealers are buying from a large and widely scattered body of producers, the latter are at a great disadvantage in the bargaining process. Where this is the case it is necessary for the producers to get together in a coöperative organization in order to bargain on equal terms with the dealers. Where there is such a need as this someone will have a motive that is sufficiently strong to induce him to give his time and attention, to sit up nights, to labor in season and out of season, to keep the coöperative society together and make it succeed. Without some such motive as this, coöperation has seldom or never succeeded.

Competitive consumption. There is another kind of competition which always works badly. It is even worse than competitive bargaining. It may be called competitive consumption. By competitive consumption is meant a rivalry in display, in ostentation, in the effort to outshine or to outdress all one's neighbors, or at least not to be outshone or outdressed by them. This is not business competition, however, though it can be called a kind of economic competition.

From what has been said it will appear that economic competition is not synonymous with the productive methods of struggling for existence as outlined in the beginning of this chapter. There is such a thing, it is true, as competitive production; but competitive bargaining is partly persuasive and partly deceptive. It is persuasive when it takes the form of clever advertising, of expert salesmanship, or of shrewd and reasonably honest bargaining; it is deceptive when cleverness in advertising takes the form of artistic lying (of overstating the merits of an article advertised) or when expert salesmanship takes the same form. Competitive consumption has no productive features about it. The effort to keep up appearances, to dress better than one can afford, to spend money for purposes of display, are all deceptive, besides being wasteful and to that extent destructive. These, however, are among the more refined and less repulsive forms of destruction. For this reason, perhaps, neither law nor public sentiment has condemned them very definitely as yet.

In what fields coöperation may succeed. They who are interested in promoting coöperation should bear all this in mind. It is a waste of time and energy to try to substitute coöperation for competition in all cases. In the first place, it cannot be done, because so long as people prefer themselves and those who are near them to others who are farther from them, competition in some form will exist. In the second place, even if coöperation could be substituted for competition, it would be undesirable in many cases, though desirable in others; that is to say, there are some cases in which competition works so

well that coöperation could not improve upon it. To be more specific, competitive production, as stated before, always works well. No one has yet succeeded in making coöperation in production, either on a large scale or on a small scale, work successfully for a long period of time. This is not saying that producers may not occasionally coöperate, as when farmers help one another in special lines of work. In our rural communities, especially in previous generations, there were many barn raisings, log rollings, corn huskings, and other examples of genuine and beneficial coöperation. But these events were only incidents in a kind of life which remained, in spite of them, predominantly competitive. Even competitive bargaining sometimes works well. Where this is the case nothing is to be gained by coöperation, and it is therefore certain to fail, because the coöperators will, sooner or later, lose their enthusiasm when they see that they are not gaining anything by it; that is, when they see that it is not working any better than competition. The would-be coöperators should choose for their field of effort some situation where competitive bargaining is working badly. There they will have a chance of success. But no coöperative scheme runs itself. Even where there is a distinct and undoubted need for it, it will succeed only when some capable person gives a great deal of time and study and hard work to it.

Compulsion versus voluntary agreement. With an unerring instinct for economic falsehood a certain class of writers have persistently obscured this question of coöperation versus competition by confusing it with working under compulsion versus working under freedom of contract. The Panama Canal was not built coöperatively. The government of the United States decided to hire others to do it instead of bargaining with contractors. They who did the work did not coöperate, any more than the men who build our railroads and factories or work on our streets. If a large number of farmers unite to run a creamery or a shoe factory of their own, but do not work in it themselves, they sometimes call it a coöperative creamery or shoe factory. In reality it is only quasi coöperative. The

people who do the work in the factory are hired and have no more to say about the management than they would have if the factory were owned by an ordinary joint-stock corporation. A coöperative shoe factory, of the class which we are now discussing, is merely an organization of consumers formed for the purpose of bargaining for its shoes more successfully than it could do otherwise. It finds that it can bargain directly with workingmen, tanneries, and others to better advantage than it can bargain with private owners of shoe factories.

It is particularly erroneous to speak of an army as though it were a coöperative body. It works under authority and compulsion rather than under a system of free contracting. Soldiers do whatever they are commanded to do and not whatever they see fit to bargain to do. Experience has shown that armies can succeed in no other way. It has shown also that industry can succeed on the basis of free contract, under which no one does anything until he sees fit to contract to do so. A little military experience will thoroughly convince our people that the distinction between compulsion and freedom is not the same as the distinction between coöperation and competition.

Coöperation in setting standards of consumption. There is always an acute need for a kind of coöperation that can stop competitive consumption. Unfortunately that need is not very widely understood. One reason why it costs us so much to live is that we are everlastingly trying to keep up with someone else. "It takes all my income," said a certain congressman, "to keep up with my fool neighbors." He was expressing in this picturesque manner one of the profound facts of our economic life.[1] The things which cost us so much money are not the things which we prize for their own sakes, but the things which we feel that we must have because our neighbors have them. We are, each of us, trying to live up to a standard set by someone else. Rich and poor alike are afflicted by the same disease. The rich are doubtless more to blame than the poor, but the poor cannot escape all blame. If they would try to live

[1] Compare also Mr. Irving Bacheller's book entitled "Keeping up with Lizzie."

rationally and not try to keep pace with someone else a little richer than themselves, they would not find it so hard to make both ends meet. A little coöperation among themselves, in the way of setting their own standards of dress and fashion, would be a great help. If, likewise, the well-to-do would not try to imitate those still richer, they could be saved much worry and vexation of spirit. The individual finds himself almost helpless. "As well be out of the world as out of style" is a saying which pretty well sums up the situation so far as the individual is concerned. But a large group of people who would coöperate in the work of setting their own styles need not be either out of style or out of the world. Educated people who see the principle involved should take the lead. In so doing they would not only be doing themselves a favor but they would be conferring a priceless benefit upon the whole nation.

CHAPTER V

CONTROL OF ECONOMIC ACTIVITIES

Acquisitive activities. In the classification of acquisitive activities (p. 60) it was pointed out that there is a very important difference between economical and uneconomical methods of acquisition. It is highly important, therefore, from the standpoint of the nation's welfare that the uneconomical methods of acquisition shall be suppressed and the economical methods encouraged. Any individual who uses his time and strength in acquiring wealth uneconomically is not only going to waste himself, and therefore wasting the resources of the nation, but he is likely also to cause others to waste their time and energy in protecting themselves against him. This also is a loss to the nation. But if everyone can be induced to try to get what he wants by producing it or rendering a service to somebody else, then everyone will have a very strong motive for producing and serving. When everyone is doing his utmost to produce or to serve, the nation is very prosperous.

Methods of control. This consideration alone makes it necessary that there shall be some way of controlling the acquisitive activities of individuals. There are two somewhat widely different methods of controlling the individual. One is to control him by force, or at least the threat of force. Offering him full opportunity to enjoy the product of his own labor or the wages of his service means that others must be forcibly restrained from interfering with his enjoyment or depriving him of his possession. He, in turn, must be forcibly restrained from interfering with others who are trying to produce useful things, to render useful service, and to enjoy the fruits of their production or service. The agency which exercises this kind of control is called government.

The other method of controlling is to appeal to the good-will of the individual or to his desire for the good opinion of his neighbors. If he can be made to feel kindly disposed toward all his neighbors and fellow citizens, he is not likely to engage in any acquisitive activity which is harmful to them. Likewise, if he cares for their good opinion he will refrain from harming them in any way. If his own good-will is intelligently directed and if their good opinion and esteem are wisely exercised, he will have other encouragement to be useful to his neighbors and fellow citizens. This means that he will produce such things as they would like to have or render such services as they desire. However self-interested he may be he will prefer to prosper by these methods rather than by harmful methods. In short, he will prefer those acquisitive activities which we describe as economical in the diagram referred to and avoid those that are harmful.

In the diagram on page 60 there is a classification of methods of struggling for existence. The destructive and deceptive methods correspond to those acquisitive activities that are uneconomical and harmful. Productive methods of struggling for existence correspond to those acquisitive activities that are economical. The persuasive methods of struggling for existence are probably, on the whole, economical rather than uneconomical, though in many cases they probably overlap. So far as law and government, with their clumsy methods and reliance upon force, can control the methods of struggling for existence, they must draw the line in that diagram between deceptive methods on the one hand and persuasive methods on the other, forbidding all destructive and deceptive activities and permitting or encouraging the persuasive and productive. This is what is meant by suppressing violence and fraud and permitting discussion, persuasion, and argumentation as well as production. Morals and religion, however, may go a little further and discourage certain forms of persuasion which overlap somewhat on the field of uneconomical endeavor,—demagogy in politics, too clever and unscrupulous advertising and

salesmanship, and a good many other persuasive methods that shade off into deception. These are undoubtedly uneconomical and should be discouraged by any agency that can do so. It is difficult, however, for any agency using such a clumsy device as force to control individuals or to distinguish sharply between the uneconomical and the economical forms of persuasion and suppress the former without interfering with the latter. It is only when a method is clearly deceptive or fraudulent that the machinery of the law can deal with the case.

The need for law. Law and government have a most important part to perform in promoting the prosperity of the people. Bagehot[1] has said that the first great need of primitive man is for law,—definite, concise law. He even argued that it is more important that the law be definite and concise than that it be just, though it is very important that it be both. It is probable that a system of laws which are well understood because they are clear and concise and which are regularly enforced without variation or favoritism, even though they are in some respects unjust, is better for a people than a system of laws which are in essence just, but which are not clearly understood and not regularly and impartially enforced; but of course it would be still better if they were both just, on the one hand, and clear, concise, and regularly enforced, on the other. When everyone knows definitely what the law is and knows definitely that it will be enforced not only against him but equally in his defense, he at least knows what he can count upon. Nothing so discourages industry and enterprise as uncertainty as to what other men are likely to do; and uncertainty as to the enforcement of law contributes to that uncertainty as to what other men are likely to do.

The problem as to what the government can do, through its laws and its administration, for the promotion of the economic prosperity of the people is of the very greatest importance. The specific aim should be to call out the very best and most productive efforts of every individual. Since the greatest re-

[1] Physics and Politics (fifth edition), p. 21. London, 1879.

source of any nation is the productive energy of the people themselves, it follows that the conservation and development of that productive energy is the most constructive policy that any government can pursue. It also follows that the worst form of waste that any government could permit or encourage would be the waste of the productive energy of the people.

The repression of destructive and deceptive action. The first and most obvious thing which the government must do is to prohibit and prevent all the destructive and deceptive forms of conflict as outlined at the beginning of the last chapter. It is of the utmost importance that this shall be accomplished; and, what is equally important in determining the duty of the government, law and government are the only agencies which can accomplish it. He who has no moral scruples against pursuing his selfish interests by destructive or deceptive methods can be restrained only by the superior force of the many as it is exercised through the government. If he is allowed to pursue his selfish interests by these methods, he not only wastes his own powers in unproductive efforts but also tends to destroy the products of other people; and, what is more important, he discourages them from further productive effort and thus causes their productive powers to go to waste. It may, therefore, be said that, whatever other functions government may have, its primary function is to repress the destructive and deceptive methods of pursuing self-interest.

The first effect of this repression of the destructive and deceptive methods is to transform the struggle for self-interest from the brutal struggle for existence, where the strong prey upon the weak and the ferocious upon the gentle, into a struggle wherein the persuasive and the productive triumph over the unpersuasive and the unproductive. If it were possible (and it probably is) to carry this repression still farther, and not only to eliminate all destruction and deception but also to eliminate from persuasion all demagogy, all appeal to passion, everything, in fact, except the appeal to reason and justice, then it would be literally true that reason would everywhere

triumph over unreason, justice over injustice, usefulness over uselessness, and productiveness over unproductiveness. Under such a government each and every one would succeed in getting what he wanted in exact proportion as he contributed to others what they wanted; the most useful would be the most successful, and the indispensable man would be the great man. In that situation we should have a literal fulfillment of the words "Whosoever will be chief among you, let him be your servant." And a servant is not necessarily one who comes at your beck and call to do your bidding; he may be merely the one who does you a service or who produces what you need.

Nothing could be more favorable to the prosperity of a nation than a general following of such a rule. If we could conceive of a nation in which no one could gain anything except by producing an equivalent or by contributing an equal amount to the prosperity of someone else, then the more ardently everyone strove to better his own condition the more ardently would he be striving to better the condition of someone else, driven thereto not by benevolence or philanthropy but by self-interest. Then the more people there were striving to acquire wealth the more there would be striving to produce it and the more ardently they desired to acquire it the more ardently they would labor to produce it. Such a nation would certainly prosper out of all proportion to a nation in which destructive and deceptive methods were practiced by a large proportion of its people.

Two ways of promoting the productive life. There are two conceivable methods by which such an ideal might be realized: one is such a perfection of the moral nature of every person in the nation as to make him unwilling to gain anything without producing it or its equivalent or rendering a service of equivalent value; the other is such perfection of law and government as to make it impossible for anyone, however much he desired to do so, to gain anything without producing it or its equivalent or rendering an equivalent service. In neither case would it be necessary for men to cease caring more for themselves and

their own families and neighbors than for other men and their families and neighbors. In neither case would it be necessary to do away with competition or the struggle for individual gain. It would only be necessary so to hedge men about, either by moral restraints or by positive laws, as to compel them to compete fairly, always giving an equivalent for everything they get.

It must not be hastily assumed that the repression by the government of the destructive and deceptive methods of acquiring possession of desirable things is merely negative work. By this kind of repression every producer is protected in the possession and enjoyment of the fruits of his own productive effort. Knowing that he will enjoy the full advantage of his own industry, enterprise, and foresight, he will have the strongest kind of motive for exercising these virtues to their full capacity. This lets loose the productive energy of the people in a way which would be impossible without the protection of law and government. The kind of people who build civilizations can be trusted to take the initiative and start all sorts of productive enterprises if they are thus safeguarded. There is nothing any more positive and constructive than the free spirit of a vigorous race of people when they are left to direct themselves in the field of production, but are restrained from entering the fields of destruction and deception. They can safely be intrusted with the task of looking after themselves if those who are criminally inclined can be prevented from interfering with them. Give the people confidence in the justice and efficiency of the government and in one another, and their own productive virtues will develop, their industrial power will multiply itself, and the prosperity and power of the nation will be assured.

Confidence and economy. Confidence is one of the greatest of all economizers of human energy. Its greatest value is not in the stability which it brings to the financial market, though that is very important; it is found rather in the unshackling of enterprise which results from confidence in the government and in one's neighbors and fellow citizens. The average citizen has more points of contact with his neighbors, his associates in

business, and his fellow citizens than with the government or the financial market. It is in these numerous points of contact and in the vast sum of these dealings of man with man that confidence produces its greatest economies, and its lack the greatest waste.

Professor E. A. Ross, in his book entitled "The Changing Chinese," mentions certain bad neighborhoods in China where the farmer must guard his rice field every night to keep his crop from being destroyed or stolen. The energy that is wasted when so many people stay awake every night must be stupendous, but this waste is a trifling matter compared with the discouragement and lack of enterprise which result from the feeling of uncertainty which such lawless conditions beget. Unless we have at some time been confronted by the same or a similar situation, we can hardly realize how much energy we save by being able to sleep at night in confidence that the products of our labor will not disappear before morning.

Before we expend too much sympathy on those Chinese farmers we should consider the condition of the fruit growers, gardeners, and farmers in the neighborhood of some of our large towns. Unless one is very favorably situated with respect to police protection, one is frequently compelled to keep a watchman or else to expose the entire produce of his toil to the depredations of town marauders. Even though these marauders are generally thoughtless rather than vicious, their work is just as expensive to the producer as though they were degenerate criminals. They occasion the same economic waste and discouragement; they therefore detract just as much from the national efficiency and add just as much to the cost of the necessaries of life for all classes, the very poor as well as the very rich. Their depredations are especially disastrous to the family garden, where the owner cannot afford to hire a watchman and is himself engaged in other work which makes it necessary for him to sleep at night.

Observance of law a patriotic duty. There are three reasons for choosing the orchardist and the gardener as examples of

producers who gain through a government and a community in which they can have confidence, and lose through a government and a community in which they can have no confidence. In the first place, it is so obvious that it does not have to be proved that these men are producers who contribute certain vital necessities to the prosperity and well-being of the whole community, and that the community gains when they are successful and suffers when they are unsuccessful. In the second place, certain young persons who read this book may know something at first hand about the troubles and discouragements which those producers have. In the third place, it ought to be easy for the average person to understand that any act of his which makes it uncertain whether or not the producer will reap the rewards of his labor is an injury not only to the producer but to the consumer and to the whole nation as well, and that, in consequence, the observance of law and the preservation of order are as truly patriotic duties as fighting the battles of one's country.

Standardization and economy. Aside from police protection there are certain other important functions which law and government can perform better than private individuals or voluntary groups of individuals. One of the most important of these is the standardizing of coins, weights, and measures. Whatever differences of opinion may exist with respect to other functions of government, little is said or to be said against coining money and fixing the standards of weights and measures.[1] Though these two functions are grouped together in the same clause of our federal constitution, it is doubtful if it is generally understood what a close connection there is between them. Both result in great economy of effort in the transfer of goods. The economy involved in transferring coined money instead of uncoined metal is apparent. Coining the metal by a reliable and responsible government merely gives the public confidence in its weight and fineness. When it is once coined it is enabled to pass from hand to hand without the labor of in-

[1] See the author's articles on "Standardization in Marketing," *Quarterly Journal of Economics*, February, 1917.

spection on the part of everyone who receives it. Otherwise the receiver would always have to weigh it to determine its quantity and test it to determine its quality. When it is coined it "sells" (if we may speak of selling money) on grade and reputation rather than on inspection. Confidence is what makes it sell on grade and reputation; lack of confidence would necessitate inspection,—that is, weighing and testing,—which would be very wasteful of time and labor.

Selling on grade rather than on inspection. By the process of standardization any other commodity may also sell on grade and reputation rather than on inspection. This also would be economical and, as in the case of coin, would be a result of confidence. All civilized governments have done something toward standardization and the establishment of confidence by fixing uniform standards for determining quantity; that is, by fixing standards of weights and measures. In proportion as these standards are fixed and enforced by law we save time and energy in transferring goods. If it were possible to go farther and fix and enforce standards of quality as well as of quantity, still greater economies would be effected.

Individuals and firms have sometimes succeeded in standardizing their goods, both as to quantity and as to quality, so effectively that buyers can buy on grade and reputation rather than on inspection. Whenever individuals or firms succeed in inspiring such a degree of confidence, it generally increases the salability of their goods. It saves the purchaser some time and trouble, and he is usually willing to pay something for that saving. Only the government, however, can enforce uniform standards among all producers and all dealers.

Not the least of the advantages of a minute division of labor[1] is the fact that each individual can avoid the necessity of being expert in many things and therefore has time to become a specialist in one thing. One of the advantages of standardizing commodities is that the average consumer can save himself the trouble of being an expert buyer or an expert judge

[1] See Chapter X, on The Division of Labor.

of the many things which he has to purchase. If he has confidence not only in the weights and measures but also in the government which standardizes and the seller who uses them, and if he has the same degree of confidence in the alleged quality of the goods offered for sale, he may make his purchases with very little expenditure of time and strength and save his time and strength for his own special work.

Enforcement of contracts. The enforcement of contracts and agreements is another way of creating confidence and, through the creation of confidence, of economizing energy and encouraging production. Where men commonly regard contracts as scraps of paper and do not solemnly and completely fulfill them, and where law and government fail to compel their literal fulfillment, there would, of course, be great difficulty in working together in productive enterprises.

The exercise of authority. It is clear, therefore, that one very important function of government is to create that state of confidence which results in economy, and to create it, first, by repressing destruction and deception through the police power of the state, second, by standardizing products, and, third, by enforcing contracts. These tasks, which are necessary in the interest of the highest economy, are thrown upon the government because no other agency is in a position to perform them. They call for the exercise of authority, backed up by physical force, and that is a work which can be intrusted to no private agency.

Producing nonmarketable utilities. We need not limit the functions of government, however, to those requiring the exercise of authority, though usually it will be found that the government is best fitted to perform those which require some degree of authority, whereas private individuals and organizations can usually be intrusted with those enterprises which can be carried out wholly on the basis of free contract. This distinction is not always clear, but a little careful study will usually reveal the fact that there is an element of compulsion in those enterprises which the government carries on most suc-

cessfully. The maintenance of lighthouses will serve as an illustration. If a private company were to maintain lighthouses, its product (light) would be difficult to sell. The light would shine for all who came within its reach, and the shipowner who refused to pay for it would get the same advantage as the one who paid his share. All who get the benefit should be compelled to pay a share of the cost, either in the form of taxation or in some other form. This requires a power of compulsion which the government alone possesses.

Even in the case of the post office, as it is thought best to run it, there is an element of compulsion. Many local post offices are maintained at a loss, since there is not local business enough to pay expenses. Under private management these local offices would be closed, unless the people of the neighborhood would voluntarily pay enough postage to cover expenses or unless larger communities would voluntarily pay enough surplus to cover the losses on the smaller offices. It is deemed expedient to establish a uniform rate, regardless of differences in the cost of service. Some people are therefore compelled to pay more than the cost of the service which they receive, in order that others may get their service for less than it costs. No one complains of this; but it is apparent that it could not be carried on in this way on the basis of free contract. Some degree of compulsion is necessary in order to compel some people in some localities to pay higher rates than are necessary,—higher than they would have to pay if they were permitted to patronize private postal carriers. The good of the whole country seems to demand that this be done. The government alone can exercise the necessary authority, since it is sometimes thought best even to compel the people to pay in the form of taxes enough to cover the losses on the postal business.

However, we need not hold to any hard-and-fast definition of the functions of the government. It is sufficient to say that anything is a proper task for the government if there is a reasonable ground for believing that the government can do it better and more economically than private enterprise can rea-

sonably be expected to do it. That reasonable ground exists in favor of government enterprise whenever authority or compulsion is necessary to its successful accomplishment. When there is no need whatever for compulsion (that is, when every part of the work, including the selling of the product, can be conducted on the voluntary basis of free contract), the general tendency is to leave the task to private enterprise.

Beneficent uses of power. There is a wide difference, however, between using force to compel a man to do something which he has voluntarily contracted to do and using it to compel him to do something which he has never agreed to do and would prefer not to do. As a matter of observation it will be found that most if not all of the things which the government is able to do well involve some element of compulsion of the latter kind. Public education will serve as an example. Wherever it is a success there is either compulsory attendance or compulsory payment or a combination of both. In the lower grades of our public-school system we have both. In the higher grades and in our state colleges and universities we have compulsory payment; that is, the taxing power of the government is used to procure the means for the payment of expenses. Both compulsory attendance upon the lower grades and compulsory support of all grades are beneficent uses of the power of the government over the individual; but it must be remembered that it *is* the use of power. There is no reason for believing that a government school on a purely voluntary basis would be superior to a private school; that is to say, if both attendance and payment were voluntary on the part of individuals, it is difficult to see how it could be more successfully managed by the government than by some private agency.

That which is true of public education appears to be true of every other enterprise upon which it would be possible for the government to enter. The government has no advantage over a private individual or a voluntary association of individuals except in the use of force or compulsion. That is to say, any enterprise which can be carried on on a purely voluntary and

contractual basis, without any use of compulsion except in the enforcement of contracts which are themselves voluntarily entered into, can probably be fully as well managed by private individuals and associations as by the government; but if any degree of compulsion is necessary in order to insure its success, it becomes a fit subject for government enterprise. There is undoubtedly a large field for the beneficent exercise of compulsion. There is also a large field where freedom and voluntary agreements are better than compulsion. If we can locate the limits of the beneficent exercise of force, we shall have located the limits to the beneficent exercise of government enterprise.

Human interests sometimes in conflict and sometimes in harmony. In a previous chapter it was pointed out that human interests are frequently in conflict with one another; they are also frequently in harmony with one another. Where they are in conflict (that is, where one man's interest conflicts with another's) there is likely to be trouble. Only three things can prevent uneconomic (that is to say, either destructive or deceptive) conflict. The first is the voluntary submission of the weaker man through fear. That results in despotism. The second is such moral self-restraint on the part of one or both as will prevent a quarrel. Willingness to give up not only one's coat but one's cloak also would preserve peace. The third is a strong and effective umpire who will promptly decide the case and enforce his decision upon both parties to the conflict. This umpire is the government.

It will generally be agreed, except by extreme anarchists, that wherever human interests come in conflict a strong umpire of some kind will be necessary until men are so self-restrained by their morals or their religion as to govern themselves. Without such self-restraint the conflict of interests will result in the wasting of human life and energy by destructive combats, fights, and duels, unless there is a government at hand to settle the difference and send the disputants about their business.

Government control unnecessary where human interests are in harmony. But human interests are sometimes harmonious.

When this is the case the individual who pursues his own interest is also promoting the interest of others. Within this field where interests are in harmony it is true, as Adam Smith said long ago, that we are sometimes led as by an invisible hand to promote the public interests while trying to promote our own.[1] It is to the interest of the farmer to grow good crops; it is likewise to the interest of the public to have him do so. In this and a vast multitude of other cases the individual needs no compulsion to lead him to promote the public good. In all such cases it seems to work better in the long run to leave the individual very much to himself. The wise government will generally keep its hands off.

Tendency of government officers to increase their own power and importance. There is, however, a natural tendency in all human beings to magnify their own power and importance. This tendency seems peculiarly strong in that kind of person who manages to get elected to public office. Modesty is not the outstanding characteristic of the average candidate who seeks office, though he may feign it pretty well. The more the government undertakes, the greater become the power and importance of the officeholder. There is, therefore, a strong tendency on the part of all successful candidates to extend the functions of government. The arguments in favor of this policy as used by the *elected* are sometimes so subtle as to deceive the very elect. They are always made as though in the interest of the people, though they are really in the interest of the officeholding class. It is a means of exalting the position of the vote getter. It therefore behooves the average citizen who has no hope of public office to study very critically all arguments favoring the extension of the functions of the government.

[1] He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. . . . By directing (his) industry in such a manner as its produce may be of greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. . . . By pursuing his own interest he frequently promotes that of society more effectually than when he really intends to promote it.—"Wealth of Nations," Book IV, chap. ii.

The incompetent. There is, however, the question of the people who are not competent to pursue intelligently either their own interest or the public interest. The feeble-minded, the insane, and the immature who have no natural guardians must, of course, have their interests looked after and cared for by the government. With them it is not a question of the conflict or harmony of their interests with those of the public; it is a question of their competence to pursue even their own interests intelligently.

The individual's wisdom is not increased suddenly when he is put into public office. Is anyone really competent to pursue his own interest intelligently? This question is sometimes asked by those who advocate government activity in behalf of all classes of people. This is not a very convincing argument, for the reason that it goes too far. If no one is competent to look after his own interests, how can he possibly be competent to look after the interests of the rest of mankind? The office-holder is merely a man or a woman like the rest of us. If we are not able to look after ourselves, neither is he or she able to look after himself or herself, much less to look after the rest of us.

Because of such considerations as these, the wisdom of mankind has for centuries moved toward the conclusion that government should confine itself mainly to the control of the field where individual interests come in conflict, leaving mature people of sound mind to govern themselves wherever and whenever their interests are harmonious. There are occasional reactionary tendencies toward more government interference, but these are usually encouraged by those whose expertness lies in the direction of vote getting rather than by those whose expertness consists in the power to do useful and necessary things.

Force not the only means of control. It has already been shown that some degree of control by government over individual conduct is necessary, first, by reason of certain conflicts of interest among individuals and, second, because of the incompetence of certain defective individuals and others of low

mentality to take care of themselves. Government is the only agency that is permitted under civilized conditions to exercise forcible control or to exercise force to control individual conduct. There are, however, other ways of influencing conduct besides force, and there are other agencies than government that may influence individual conduct. Force is necessary to prevent some of the cruder forms of misconduct, but it is probable that other influences must be relied upon to secure right conduct of the more refined sorts. Some of these refinements of conduct may be quite as important as the cruder forms. It is, for example, socially harmful for well men to remain idle when others are at work, or for a man even to run the risk of catching cold; but it would be intolerable if the government were empowered, except in great emergencies, to conscript idle men for work, or to punish a man for needlessly catching cold. In ordinary times the conservation of the man power of the nation must depend mainly upon moral control.

Waste of man power. It was suggested in a former chapter that the prosperity of a nation depended more upon the economizing and utilizing of its fund of human energy than upon any other factor and that in consequence the most destructive forms of waste were those which wasted or dissipated portions of that fund. When a man's energy is going to waste, his life is going to waste, and he becomes a drain upon, rather than an addition to, the national strength. The following outline indicates some of the more familiar ways in which men go to waste:

- Men who go to Waste
  - The idle
    - Involuntarily (the unemployed)
    - Voluntarily (the leisure class)
  - The ineffectively employed
    - Through lack of training
    - Through lack of opportunity
    - Through lack of initiative
  - The harmfully employed
    - Wasting their own energy
      - In vice
      - In dissipation
    - Wasting the energy of other people
      - By crime
      - By fraud
      - By luxury
      - By bad investing
      - By false teaching

For some of these forms of waste, law and government alone can furnish the remedy. Whenever force or compulsion is necessary and, at the same time, effective, government can and should use the force of positive law, supported by penalties. But there are many forms of waste which cannot be remedied by force or compulsion, at least not without causing greater waste of other kinds. To try to control by law such things as laziness, private vices, luxury, false teaching, and many other wasteful and harmful tendencies would require an intolerable amount of espionage and repression. The waste from this source might easily overbalance the waste from the bad habits which the law was trying to control. In all such cases we must fall back upon morals and religion to induce self-restraint and the voluntary adoption of sound habits.

Can morality be taught? There are two conflicting theories as to the results of moral teaching. One is that such results are generally negligible because moral habits are the result of economic and social surroundings; the other is that man's moral nature may be so developed by teaching and example as to render it proof against bad economic and social conditions,—that these conditions are more likely to be the result than the cause of the moral habits of the people. The truth seems to be found in a combination of these two theories. We are undoubtedly influenced by our surroundings, but we can also by sheer force of character not only resist but even overcome and change our surroundings.

Again, weak characters are more largely controlled by their surroundings than are strong characters. Two men may go under a cold shower bath. One, being in vigorous health, comes out feeling refreshed. To him a cold shower is a favorable rather than an unfavorable condition. The other, being weak to begin with, comes out with a chill. To him it was an unfavorable rather than a favorable condition. Yet it was the same shower bath, with the same temperature, etc. If one were studying jellyfish, one might find that they were the sport of such circumstances as the winds, the waves, the tides, and the

ocean currents; but if one were studying sharks, one might, with equal certainty, find that they were independent of all such circumstances. Similarly, if one were studying human jellyfish, one might find them and their moral habits to be the result of their economic and social surroundings; but if one were studying human sharks, one might reach just the opposite conclusion. As a matter of fact, those are the conclusions, in general, which students actually reach who study two different types of people. When we study considerable numbers of the unfortunate people who have not succeeded in life, or who are more or less complete failures, we generally attribute their failures to bad surroundings or unfortunate circumstances. When we study men who have made conspicuous successes, we are likely to attribute their successes to their own sterling qualities. It would be impossible to say whether the circumstances under which the former class grew up were better or worse than those under which the latter class grew up. In fact, many of our greatest men and women came out of the worst conditions.

The unemployed. If we begin with the involuntarily idle (that is, the unemployed, as given in the outline on page 87) we shall find that many of them are the victims of circumstances which they lacked the strength to combat successfully. Frequently the hostile circumstances have been such as no one could stand against. In these cases no moral problem is involved. They are entitled to all the sympathy and aid which society can give them. In other cases it was their own weakness or their own injurious habits which made them unemployable. There is no doubt that better moral and religious teaching would have given them a moral brace and helped them to succeed. At any rate, the fact that they are now idle means that they are going to waste and are a drain upon, rather than a contribution to, the national prosperity, power, and greatness. Anything which can be done for future generations to reduce the number of such unemployed people will be a definite contribution to the strength of the nation. More moral vigor, sounder habits,

and better training are apparently needed for our economic prosperity as well as for purely moral or religious reasons.

The leisure class. When we come to deal with the voluntarily idle (that is, with the leisure class) we are on more certain ground. It is in no sense their misfortune, it is their fault, that they are idle. The fact that they are voluntarily rather than involuntarily idle implies that they could do something useful if they chose, but they do not choose to do so. It is not opportunity which they need; it is moral regeneration.

We must be careful, however, not to confuse the person who does not have to earn his living with the person who is idle. Many persons of independent means are doing work of the very highest utility to the nation and to the world. Scientific investigation, experimentation, and invention, historical and literary study, agricultural and mechanical demonstration, political reform, and philanthropy have all been promoted by men and women who could afford to give their time to such things. The leisure class, properly so called, includes only those who do little or nothing that is useful or productive, but give themselves over to mere self-enjoyment or self-cultivation. Self-cultivation as preparation for useful work is itself, of course, useful; but without some useful object in view (that is, without a view to making oneself a contributor to the national prosperity and well-being) it is useless. The person who spends his time in this kind of self-cultivation is going to waste as truly as though he were spending his time in eating, drinking, and acquiring adipose tissue, gout, or diabetes.

Whoever belongs to the leisure class as thus defined is a drain upon the wealth and prosperity of the nation. The nation is better off every time such a person leaves the world. Since he does nothing useful, nothing is lost when he ceases to exist. When he ceases consuming, his food and clothing at least are saved. His wealth, of course, remains behind even after he is gone. He came into the world naked, and when he leaves the world he takes nothing with him. The more such people there are in the nation in proportion to the workers the worse it is

for the nation in the long run. The fewer such people there are (that is, the larger the proportion of workers) the better off the nation will be in the long run. The whole nation has to be supported by the labor of those who work. If all the people work, the task is lightened or else the people live better. If only a part of them work, either the burden upon the workers is heavier or else there is less produced and consequently less wealth.

Do idle consumers make a market for producers? It is sometimes argued, however, that a large number of consumers who are not themselves producers is necessary to make a market for the producers. An appearance of reasonableness is given to this argument by taking the case of a single product, say potatoes, though any other product would do equally well. It is undoubtedly a good thing for the potato growers to have a large number of consumers of potatoes who are not themselves growers of potatoes, provided the consumers have something to give in exchange for potatoes. If the would-be consumers of potatoes do not have something to give in exchange, the growers will gain nothing from them. The more the consumers have which can be given in exchange, the more profitable it is likely to be for the potato growers. If the consumers of potatoes are living on accumulated wealth, they will have less to give in exchange than they would have if, in addition to their accumulated wealth, they were also producing or earning something. The more workers there are in other productive fields besides potato growing, the more other things there will be to be given in exchange for potatoes. This is a statement which can be repeated with respect to each and every industry or occupation, which merely brings us back to the general statement that the more workers and the fewer idlers there are in any nation, the more abundant will goods of all kinds become and the more rapidly will the nation advance in prosperity and power. Overproduction of everything is an impossibility.

Some are willing to grant, however, that it would be better economically if everyone would work than it would be if some

wasted their time in idleness. After admitting this, it will be asked, nevertheless, Has not a man a right to remain idle if he has accumulated enough to support himself without further work? Assuming that he has earned his accumulation and has not secured it by inheriting it, by marrying it, or by a fortunate speculation in land, there is something to be said for this contention. But he who does less well than he can, does ill. One who is still capable of doing useful work and chooses not to do it is certainly doing less well for his country than he might, even though he did well when he accumulated wealth.

Should men be allowed to accumulate wealth? But why rely upon morals and religion to prevent this form of waste or ill-doing? Why not prevent men from living in idleness by forbidding them to accumulate wealth or by taking it away from them by law if they do so? Here is a dilemma which no kind of compulsion can remove. If men are not allowed to accumulate wealth, they will then be encouraged to consume their incomes as they go along. Wasteful or luxurious consumption is quite as wasteful as idleness. Here, then, is the dilemma. If men whose incomes are larger than is necessary to support them and their families in that degree of comfort which will maintain their efficiency at its maximum are not allowed to accumulate, they will consume more than is necessary; that is, they will consume wastefully. If they are allowed to accumulate a part of their incomes, some of them will be able to accumulate so much that either they or their children may live without work. It is deemed better and more economical to allow them to accumulate and then appeal to them on moral and religious grounds not to waste their lives in idleness or useless self-amusement, but to use both their time and their wealth productively, than to take away their accumulations and thus encourage them to consume wastefully.

Let us assume, by way of illustration, that two men, A and B, have equal incomes, and that their incomes are more than sufficient to maintain them and their families in efficient comfort. A consumes his entire income and never accumulates

anything, while B consumes only a part of his income, investing the remainder in productive enterprises of various kinds. The overconsumption of A and his family accomplishes nothing. What they consume over and above that which is necessary for efficient comfort is wasted as far as the rest of the country is concerned and might just as well have been burned or thrown into the sea, if that would have given them any amusement or satisfaction. B's surplus, however, has gone into the expansion of industries and the increase of the productive power of the country. Up to this point B has done much better than A. Now let us assume that after a period of years B decides that he has worked long enough and that he will spend the rest of his life in sheer idleness or self-amusement. A, having accumulated nothing, cannot retire, but is compelled to go on working as long as he is able. From this point on, A is doing better than B. During their whole lives it is difficult to say which does the better, but the odds are slightly in favor of B. If, however, B can be persuaded not to remain idle, but to continue doing something useful, even if he does give up his earlier business, the advantage is decidedly with B.

The kind of talent that goes to waste. There is one aspect of the problem of the leisure class which makes it especially important. That is the quality of the people of whom it is made up. If this class were made up of the ignorant, the weak, and the incompetent, the loss would not be so great. That part of the leisure class which is commonly referred to as the tramp, or hobo, class may be thus described. There is a certain amount of waste involved here; but as long as they do not become a positive nuisance by their lawlessness and vagrancy, the waste is not so very great. Even if they were all at work, they would not be worth much; consequently the mere fact that they are idle does not of itself occasion much loss. Their criminality is, of course, another matter.

That which is commonly known as the leisure class, however, differs from the vagrant class in at least one important particular. It is made up in the main of men and women of more

than average native capacity. The man, for example, who has been able to accumulate a fortune out of his own earnings, or by his own business foresight and capacity, is pretty certain to be a man of considerable productive capacity. If he chooses to use that capacity in productive enterprises, he can add materially to the wealth and prosperity of the whole community. If he chooses not to use it, the loss to the community is correspondingly great. These considerations present a problem of the very greatest magnitude. The greater the productive capacity of the individual, the more desirable it is, from the standpoint of national prosperity, that he shall use that capacity. On the other hand, the greater his capacity, the more likely he is to accumulate a fortune and, consequently, if he is not controlled by high moral and religious motives, the more likely he is to retire from business and live in idleness. If he were a man of low productive capacity, it would not be so great a loss if he were to retire; but such a man will seldom be able to accumulate a sufficient fortune to be able to retire.

Lest there should remain some doubt as to whether it is a loss to society when a man of great capacity for usefulness stops working, let us consider the case of a great surgeon. The author has such a man in mind. He is so skillful and so capable that his services are sought by large numbers of people. He could have retired years ago and lived in elegant leisure on his accumulated wealth. Had he chosen to do so some hundreds of people would have been deprived of the benefit of his skill. Had he been a man of mediocre ability it would not have mattered much; but a man of mediocre ability could not have accumulated enough to be able to stop working. The fact that this brilliant surgeon is so much needed is the very thing which would have made it possible, if he had been a man of perverted morals, to stop working; but that is the very reason why he should not stop. There seems to be no solution of the problem, except sound moral standards, which will keep such men busy. If they lack such sound moral standards, even compulsion would not call forth their best efforts. That

which has been said of our great surgeon may be repeated of any great man in any useful occupation.

The ineffectively employed. By the ineffectively employed are meant all those who, through lack of training, lack of opportunity, or sheer lack of initiative, are now doing less useful work than they might have been doing had they had the proper training, opportunity, and initiative. These include men who are doing unskilled work who might have been doing skilled work, men doing skilled manual work who might have been doing expert mental work, or men doing routine mental work who might have been doing work requiring inventiveness, originality, and enterprise. This is primarily an educational rather than a moral problem. The question of morals and religion enters into the problem to a certain extent, however. No matter how many and excellent the schools and other educational opportunities, unless students are inspired with a high purpose to make use of the opportunities which are furnished, these opportunities alone will not solve the problem. Large numbers will remain unskilled, ignorant, and in a low state of productivity. The individual who remains less useful to the nation than he might be is not only doing himself an injury but is also injuring the nation. He who does less well than he can, does ill.

Vice as waste of energy. One very good definition of a vice is that it is a habit which wastes or dissipates human energy. It should, perhaps, be distinguished from crime in that vice wastes one's own energy, whereas crime wastes not only one's own but that of other people besides. No community which wastes in either way a large proportion of its energy can hope to prosper as much as a community which does not. The use of drugs which merely produce excitation or irritation of the nerves, overindulgence in any kind of excitement beyond what is necessary for recreation, or even excessive devotion to sport may become a vice in this sense as truly as excessive eating or drinking. Crime and fraud seem to call for the use of the compulsory power of the state rather than for moral suasion.

Luxury. Luxurious consumption can be controlled by authority and compulsion to a certain extent, but not wholly; that is to say, there are certain clear and undebatable forms of luxurious consumption, such as the use of alcohol and opium, which the government can safely prohibit, but much must be left to the discretion of the individual. There is a time-worn argument to the effect that luxurious expenditure gives employment to labor and thus benefits the poor. This is similar in principle to the theory that the destruction of property, say the burning of a building or the breaking of a window, gives employment to labor. The stupidity of this argument was never more clearly shown than by Frédéric Bastiat in his famous work entitled "Sophisms of Political Economy." He pictures a shopkeeper who is about to chastise a scapegrace son who has broken a pane of glass. Some sympathetic bystanders argue that the boy is really a public benefactor in that he has made work for the glazier, who will then have six francs, the cost of a new pane, to spend, and that the butcher, the baker, and others will share in the benefit.

Assuming that it becomes necessary to spend six francs in repairing the damage, if you mean to say that the accident brings in six francs to the glazier, and to that extent encourages his trade, I grant it fairly and frankly, and admit that you reason justly.

The glazier arrives, does his work, pockets his money, rubs his hands, and blesses the scapegrace son. That is what we see.

But if, by way of deduction, you come to conclude, as is too often done, that it is a good thing to break windows, that it makes money circulate, and that encouragement to trade in general is the result, I am obliged to cry, halt! Your theory stops at what we see, and takes no account of what we don't see.

We don't see that since our burgess has been obliged to spend his six francs on one thing, he can no longer spend them on another.

We don't see that if he had not this pane to replace, he would have replaced, for example, his shoes, which are down at the heels; or have placed a new book on his shelf. In short, he would have employed his six francs in a way in which he cannot employ them

now. Let us see then how the account stands with trade in general. The pane being broken, the glazier's trade is benefited to the extent of six francs. That is what we see.

If the pane had not been broken, the shoemaker's or some other trade would have been encouraged to the extent of six francs. That is what we don't see. And if we take into account what we don't see, which is a negative fact, as well as what we do see, which is a positive fact, we shall discover that trade in general, or the aggregate of national industry, has no interest, one way or the other, whether windows are broken or not.

Let us see, again, how the account stands with Jacques Bonhomme. On the last hypothesis, that of the pane being broken, he spends six francs, and gets neither more nor less than he had before, namely, the use and enjoyment of a pane of glass. On the other hypothesis, namely, that the accident had not happened, he would have expended six francs on shoes and would have had the enjoyment both of the shoes and the pane of glass.

Now as the good burgess, Jacques Bonhomme, constitutes a fraction of society at large, we are forced to conclude that society, taken in the aggregate, and after all accounts of labor and enjoyment have been squared, has lost the value of the pane which has been broken.

In one respect the argument against luxury is less strong than that against the breaking of a pane of glass, but in another respect it is stronger. When the shopkeeper in the story has to spend six francs on a pane of glass, he gets no satisfaction out of it and deprives himself of a pair of shoes which he needs. Had he spent the six francs on a luxury, he would presumably have got some enjoyment out of it, even though it had been followed by indigestion or a headache. To this extent it would have been better to have a luxury costing six francs than to have been compelled, through the carelessness of an overexuberant son, to spend that amount on a pane of glass. On the other hand, when one compares the expenditure of money for a luxury with the investment of money in tools or other instruments of production, one does not get so favorable a picture. When one spends money for a luxury, one does, it is true, set

labor to work, in a luxury-producing industry; but if one were to spend the same amount of money for tools, one would set an equal quantity of labor to work in a tool-producing industry. It is at least as desirable to give work to tool-makers as to luxury producers. In fact, it is much more desirable. The more men there are working in tool-making industries, the better supplied with tools the nation will be. The way they are set to work is by the purchase of tools; that is, by the investment of money in tools.

If you have a dollar to spend over and above what is necessary to maintain you in efficient comfort, you have your choice of spending it on some unnecessary article of consumption or of investing it in some productive enterprise. Whether it be a dollar or a hundred thousand dollars, the principle is the same. If you decide to invest your money in a productive enterprise, you tend, to the extent of your investment, to set labor to work erecting the buildings or manufacturing the machines which will be needed in production. The more people there are who are investing in this way, and the more they invest, the more productive enterprises we shall have. This not only sets labor to work preparing the buildings and machinery but will continue to employ labor to run the enterprises. Again, as a result of this, more goods are produced and the nation is better fed, clothed, and supplied with all necessaries. It is, therefore, very much better that there should be a great many people investing their money productively than that they should merely spend their money for extravagant luxuries which are of no use to anyone except themselves. He who does less well with his money than he might do is doing badly. He therefore does badly who spends his money luxuriously when he might invest it productively.

Emulation in extravagance. Nothing could contribute more to the general prosperity and well-being of the nation than such moral habits as would discourage extravagant consumption and encourage thrift and wise investments in all sorts of productive enterprises. A particularly vicious and wasteful factor in many

a social group is competition or emulation in extravagance. What Professor Thorstein Veblen[1] has called "conspicuous waste" is sometimes required of everyone with social ambitions. Of all forms of competition, competitive consumption is the most pernicious and wasteful. When men and women try to advertise their solvency by ostentatious wastefulness, there develops a real competition to see who can advertise most effectively.

This is part of a very widespread tendency. Certain Chinese mandarins of an older day used to allow their finger nails to grow to inordinate lengths as a visible sign that they did not have to work. The binding of the feet of women served much the same purpose. Where work is not regarded as respectable, some visible sign of respectability is generally sought. Sometimes these customs are copied even by those who do have to work, as in the case of high-heeled shoes and of long trains.

Emulation in the waste of physical energy. It is not only the possession of plenty of money which is thus vulgarly advertised. The possession of abounding physical energy is also advertised by the practice of conspicuous vices which tend to dissipate energy. The young man who can dissipate freely can thus advertise to the world that he has recently come into possession of health and energy and now has them to spare, just as one of the newly rich can advertise to the world that he has money to spare when he spends it extravagantly. When there is no sense of moral values and no sober self-restraint, the possession of abundant health and the possession of abundant money lead to equally demoralizing vices. The poor are safeguarded by their poverty from the extravagant use of money, but they are quite as likely to indulge in the extravagant uses of vitality as are the rich. If there be any difference, the dissipation of physical energy is worse than the dissipation of money.

The teacher, the preacher, or the moral leader who can persuade the people to abandon such habits and use their surplus money and their surplus energy productively rather than

[1] The Theory of the Leisure Class.

wastefully will deserve to stand among the greatest of statesmen and nation builders. Nations are built by the wise expenditure of human energy. The less it is wasted, and the more it is used up in productive or useful work, the greater the progress of the nation.

We have chosen to discuss, in this chapter, a theme which is not ordinarily treated in works on economics. It has generally been assumed that economics has nothing to do with morals and religion. With certain sentimental and conventional aspects of these human interests, perhaps, the economist has nothing to do. But in so far as they are factors, or may become factors, in national wealth, prosperity, and power, nothing can be of more interest to the economist. Even religion, if it stimulates the productive virtues and discourages the vices which waste and dissipate human energy, may become one of the greatest factors in the building of a great, prosperous, and powerful nation. The nation which possesses such a religion will eventually outgrow in all these particulars the nation which does not, or which possesses a religion which enervates, which lulls to sleep, or which represses the productive virtues.[1]

[1] For a fuller discussion of this topic, see the author's book entitled "The Religion Worth Having." Houghton Mifflin Company, Boston, 1912.

CHAPTER VI

ECONOMIC INSTITUTIONS

I. Voluntary Agreement

Compulsion and government. The most important characteristic of the economic life of civilized people is its freedom from compulsion. Nearly every economic act of the average individual is one which he does voluntarily. Even when he is under compulsion, it is usually found to be for one of a very few reasons. It may be to prevent him from using violence or fraud against someone else. It may be to compel him to carry out an agreement into which he has voluntarily entered. He may be compelled to pay taxes, and he is sometimes compelled to perform military and other service. The striking fact about all these and all other cases of compulsion which are tolerated by civilized people is that they are all exercised by the government. Among all free people one private citizen is forbidden to exercise compulsion over any other. That is a work which is reserved exclusively for the government through its officers. "Compulsion is mine; I will compel," says the government.

Dangers of compulsion. The power of compulsion is dangerous, and its exercise is generally regarded with disfavor. It seems impossible, however, for large numbers of people of all kinds, classes, and degrees of intelligence and reasonableness to get along together without some umpire to decide disputes and enforce his decisions. This means that there must be somewhere a power of compulsion; that is, the power to compel men, by physical force if necessary, sometimes to do some things which they would prefer not to do, and to leave undone things which they would prefer to do. This power, however, is very carefully safeguarded. It is safeguarded first by being with-

held from everybody except the authorized agents of government. Even they are very carefully hedged about and compelled to proceed in careful and orderly ways in exercising compulsion. We have an elaborate system of rules for the settlement of disputes and especially for the collection and weighing of evidence in cases of alleged crime. The accused person is so carefully safeguarded that it is very difficult to convict him unless the evidence of his guilt is beyond reasonable question.

The ballot as a necessary check upon the power of compulsion. Back of all these rules and regulations of court procedure and of government administration we have the system of balloting as a check upon those who govern us. With the ballot in our hands, even the government itself cannot use more compulsion than the majority of us are willing that it should use. The ballot is our ultimate safeguard against abuses of that power of compulsion which must be exercised by governments. It is a most important weapon of defense, but its importance is due to the fact that government officers possess the power of compulsion, and, though it is a necessary power, it is the most dangerous power that any human being can possess. It is so dangerous that in a free country it is positively forbidden to private individuals, and even the government officers, who exist partly for the purpose of preventing private individuals from exercising compulsion, are permitted to exercise it only under the most careful safeguards.

Contract. One of the greatest discoveries of the human intellect is that large enterprises can be carried out by voluntary agreement among free citizens. Where enterprises can be carried out by this method they are found to be carried out more effectively and economically than under compulsion. It is true, however, that there are some things that cannot be done by voluntary agreement. In order that the government, a compulsory organization, may pay its bills, it cannot rely wholly upon voluntary gifts; it must use compulsion to collect taxes. If a great war is to be fought, it is not only necessary to levy

compulsory contributions to pay the expenses of the war, it may be necessary to resort to conscription to recruit its armies. The army itself in the actual process of fighting has to act under a centralized command. Authority and obedience, therefore, rather than voluntary agreement among equals, is the basis of all military organizations. It would be quite possible to organize industry on the same basis; that is, to levy compulsory contributions to support the industries, to conscript labor to man them, and to have everything done by authority and obedience rather than by contract or voluntary agreement. The experience of the world, however, has shown that those countries that have tried to run their industries primarily or even largely on a basis of authority and obedience have not prospered quite so much as those that have given a large measure of freedom from compulsion and have permitted industries to be organized on the basis of voluntary contracts and agreements. Even people who, in the abstract, disapprove of the system of voluntary agreement usually prefer to live in those countries where this is the rule and are glad to emigrate from those where authority and obedience are the rule.

Repression of violence. In order that there may be the largest possible opportunity for voluntary agreements among free citizens, it is absolutely necessary that no private citizen shall be allowed to compel any other citizen to do anything against his will. If that were permitted, the system of voluntary agreement would suffer a great setback. But if you are prevented from exercising any compulsion over your neighbor, you will not be able to get him to do anything for you, to produce anything which you would like to have, or to give you anything in his possession except by his full and free consent. You are then reduced to the necessity of persuading him to do voluntarily what you otherwise might, if you were strong enough, compel him to do.

Property follows freedom from violence. It cannot be too much emphasized that property exists automatically and necessarily in any group where the individual is safeguarded against

violence. If he is safeguarded against violence, he may hold anything in his possession until he sees fit to give it up of his own free will. If anyone who tries to dispossess him by violence is promptly repressed by the group, that very act on the part of the group safeguards him in his possession,—it transforms his possession into property. In short, the essence of property exists instantly, automatically and necessarily, as soon as violence is repressed. Nothing but force or violence either destroys private property or seriously limits it. Practically every limitation that exists or ever can exist in the absolute right of property is due either to the failure of the group to protect the individual against some infringement or to the exercise of force or authority by the group itself to limit the individual's power over his possessions. If we once get this point clearly in mind, and never forget it, it will save us from much confusion of thought later on. It is the most important fact in the institutional background of our present economic organization.

The extent to which violence is repressed is a fairly good test of the quality of our civilization. The most important difference between civilization and savagery is this: the civilized man tries to prosper by making himself so useful that others will be glad to reward him for his usefulness, while the savage tries to prosper by making himself so dangerous that others will be afraid to refuse his demands. When all citizens try to prosper by the method of usefulness we have the highest state of civilization, but when all try to prosper by the method of dangerousness we have the lowest state of savagery, and when a part of the citizens try one method and a part try the other we have something between. Not many people can live together under savagery, because dangerousness destroys rather than supports life; many can live together under civilization, because usefulness supports rather than destroys life.

Property of some kind, belonging to groups or to individuals, necessarily belongs to civilization and grows with civilization, because civilization is characterized by the absence of violence one toward another and the prevalence of voluntary agreement

among citizens who are free from violence. The mere fact that the law forbids you to take by force anything in the possession of your neighbor creates in him, as a by-product of your legal restraint, the legal right of property in the thing in question. In proportion as you are prevented by law from using force against him, in that proportion is he protected by law in the possession of the thing which you might covet. This repression of violence on the part of the government means, in and of itself, that no one can be dispossessed of his possessions against his full and free consent. This is, as stated before, the very essence of property.

Repression of fraud. Again, if one citizen were permitted to get some desirable service or possession from another citizen by deception or fraud, this would not be in harmony with the system of voluntary agreement and would give that system almost as great a setback as though one were permitted to use force. It is understood that an apparent agreement is not really a voluntary agreement unless its meaning is understood by both parties. If one is deceived and obviously does not understand the meaning of the quasi agreement, it is not a real agreement. The prevention of fraud is, therefore, essential to the preservation of the system of voluntary agreement. The suppression of violence and the prevention of fraud together produce the institutions of property and contract as by-products of the system of voluntary agreement among free citizens.

Enforcement of contracts. There would be another serious setback to the development of the system of voluntary agreement if agreements were not carried out or promises kept. If you should make a voluntary agreement with a fellow citizen and should yourself receive some benefit from it, and then should refuse to carry out your part of the agreement by which he would receive his expected benefit, he would be very cautious about entering into another agreement with you. If men in general were free to withdraw from an agreement in this way, they would all be cautious about making agreements. In short, the system of voluntary agreement could not develop very far

unless there were some means of compelling men to fulfill their parts of the agreements which they voluntarily made. The enforcement of contracts is, therefore, a necessary part of the system.

II. Property

Property a by-product of freedom. It is obvious that the only way in which free men can work together is on the basis of voluntary agreement. The system of voluntary agreement is, therefore, a necessary product of freedom. It was suggested above that the institution of property was in turn a by-product of the system of voluntary agreement. There could not be an absence of compulsion without property, and the existence of the power of compulsion is the only limitation there is on property. If private individuals are permitted to use compulsion against others with no check or hindrance on the part of government, there is no such thing as property. Where they are forbidden to exercise any compulsion one against the other, there is property. Where this is true the only limitation left upon the right of property is the compulsory power of the government; that is, the government may take property without the consent of the individual possessor. The more the government chooses to exercise this power, the more it limits the property rights of individuals.

The historical development of the system of voluntary agreement has been a slow process and has been accompanied by the equally slow development of the institution of property. There have been a good many attempts to trace the historical development of the institution of property independently of the underlying conditions that make property possible or conceivable. Needless to say, such attempts are of no great scientific value.

Ways of acquiring property. The individual who has found, picked up, or made a thing which he needs, or to which he has taken a fancy, becomes the recognized owner of it when organized society undertakes to protect him against violence and

fraud. If this is done, no one else can dispossess him of it without his consent. Where this is the case, a person can only come into possession of a thing by finding it, making it himself, or getting it from someone else with that person's consent. That consent may be obtained in many ways, but a very common way is to buy the object of its possessor by offering him in exchange for it something that he would rather have. Under this system it has generally been held that the finder of a thing can no more be dispossessed by violence than the maker of a thing. In other words, if you have discovered, found, or picked up some object not hitherto possessed by anybody else, you cannot be dispossessed of it without your consent, which means literally that you own it. If somebody else wants it, he can get it from you only with your consent; and that may mean, and usually does mean, that he must give you something in exchange for it.

Development of the idea of property. The historical development of the custom of recognizing property in this sense has been variously described. In a very illuminating article, entitled "Rudimentary Society among Boys,"[1] Mr. John Johnson has described the life of the boys on McDonogh Farm in Maryland. This farm, the model for many subsequent experiments in pedagogics, was a combined home and school for boys in which, out of school and work hours, they were allowed to roam at will and do very much as they pleased. The author of the account, who had himself been one of the boys, traces an interesting parallel between the development of laws and customs among those boys and among our primitive ancestors.

A Boy Society. Over these teeming eight hundred acres the "McDonogh boys" roam at will, each according to his ability striving to become a mighty hunter in the earth. During the first spring after the opening of the school the boys found the woods abounding with birds' eggs and squirrels, which they might have for the trouble of taking. During the autumn they gathered chestnuts and walnuts

[1] Johns Hopkins University Studies in Historical and Political Science, Second Series, No. XI. Baltimore, 1884.

and stored them away to be cracked and eaten before the big fire in the schoolroom. Whether in spring or in autumn, all who went to the labor of searching were rewarded with an abundance. When the frost had killed the green shoots and troubled the rabbits to get a living, every boy that chose to do so set traps in the swamps and ditches and baited them with sweet-smelling apples or more pungent and effective onions.

The ground was then regarded as the property of the community, and while, like the ancient Teutonic villager, each "McDonogh boy" took pains to exclude strangers from the *Mark*, each regarded himself with the rest as a joint owner of the harvest of nuts, and all had equal rights of hunting and trapping in the waste. As in the precursors of those Aryan villages of the East, recently studied by Phear, "land was not conceived of as property in the modern sense, or as belonging to any individual." The whole was common to them all, and every boy had a right to a portion of the fruits of the ground.

* * * * * * * * * * *

The rabbit-trapping season begins about the middle of October and ends early in December. Its opening depends upon the weather and not, like the walnut harvest, upon the legislation of the boys. If there is an early autumn the rabbits may be induced by the scarcity of food to enter the traps sooner than if the warm weather continues till late.

In the first autumn after the opening of the school each boy that chose to do so made a box of planks, fitted one end with a door that would fall at the touch of a trigger, and, having found a promising spot, there set his trap. The hungry rabbits were tempted with fragrant apples and appetizing onions, and a few victims were enticed within the fatal door. At that time no boy set more than half a dozen traps, and almost the whole school enjoyed the delightful anticipation of having rabbit for breakfast on some future morning.

But the spots where rabbits can be caught on eight hundred acres are comparatively few, and hence the closeness of the traps interfered with the amount of the catch. It is a habit with rabbits to move about in well-marked paths, and the boys usually set their traps in these places. Generally a rabbit will enter the first trap in his path, and boys often complained that their traps were rendered

useless by the proximity of others. After a year or two of this unsatisfactory state of affairs a large boy, who had set his traps rather earlier than the rest, began dropping heavy stones upon all traps set closer to his own than he thought desirable. In such a society as we are studying, a hard-fisted fellow of fifteen is a great personage and has much the same influence as a great warrior in a primitive village. The example of this boy-magnate was imitated by all who dared; and by common consent, or perhaps by common submission, a limited distance between traps was agreed on. Within a circle about forty yards in diameter, drawn about a trap already set as a center, no other trap was to be placed. For the season the owner of the trap first placed on any given piece of ground either assumed or was intrusted with authority to break any trap placed within the specified distance of his own.

Scarcity of land. It will be noted that the scarcity of land suitable for trapping rabbits created an antagonism of interests among the members of that community. It was this which led to the effort on the part of certain fortunate individuals to protect their own interests by excluding others from their "land." The principles involved here are similar to those in a mining region where there are only a few desirable locations and many miners. In most mining camps, however, priority of possession was the basis of ownership. The staking out of a claim according to regular rules was accepted as the evidence of priority of possession.

Much the same principle was involved in the disputes over cattle ranges in the West. When there was pasture enough for everybody there was no trouble and no desire for ownership or control of range land; but when pasturage began to grow scarce it became necessary to bring the ranges under some kind of control, otherwise they would become overstocked and everybody would lose. To men with practical minds rather than vague ideals it has always seemed better that a few should gain some advantage from the soil of a given locality than that all should fail through the exhaustion of its resources. Accordingly

the exclusive use of certain ranges is given over to certain cattlemen, and others must move on to new ranges.

The Case of Abram and Lot. Abram showed such a practical mind as this in his famous compromise with Lot on the subject of pasturage:

> And Abram was very rich in cattle, in silver, and in gold.
>
> And he went on his journeys from the south even to Bethel, unto the place where his tent had been at the beginning, between Bethel and Hai; . . .
>
> And Lot also, which went with Abram, had flocks, and herds, and tents.
>
> And the land was not able to bear them, that they might dwell together: for their substance was great, so that they could not dwell together.
>
> And there was a strife between the herdmen of Abram's cattle and the herdmen of Lot's cattle: and the Canaanite and the Perizzite dwelt then in the land.
>
> And Abram said unto Lot, "Let there be no strife, I pray thee, between thee and me, and between my herdmen and thy herdmen; for we be brethren.
>
> Is not the whole land before thee? Separate thyself, I pray thee, from me: if thou wilt take the left hand, then I will go to the right; or if thou depart to the right hand, then I will go to the left."
>
> And Lot lifted up his eyes, and beheld all the plain of Jordan, that it was well watered every where, before the Lord destroyed Sodom and Gomorrah, even as the garden of the Lord, like the land of Egypt, as thou comest unto Zoar.
>
> Then Lot chose him all the plain of Jordan; and Lot journeyed east; and they separated themselves the one from the other.
>
> Abram dwelt in the land of Canaan, and Lot dwelt in the cities of the plain, and pitched his tent toward Sodom.

It is always possible to "trek." There was one important difference between the situation of the herdsmen in a cattle country, or the miners in a mining camp, and that of the boys on the McDonogh farm. When the good locations in the range country and the mining camp are all occupied, other would-be

ranchers or miners need not come to these spots, or, if they happen to be there, they can move on to other opportunities in other places. The boys could not leave the school, and when all the good locations for rabbit traps were occupied the other boys had to go without rabbit or else pay rent to the fortunate possessors of the rabbit land. It was no great hardship for Abram and Lot to separate, each going where there was pasturage, though each might, if he had been narrowly stubborn, have refused to budge an inch. On the whole, it is better that people should separate and observe boundary lines than that they should all strive tenaciously for the best locations and all suffer alike through the overcrowding.

Boundaries. This observance of boundary lines is the first element in the institution of property in land. Some rule of this kind is an absolute physical necessity. In some cases the boundary is tribal or national, in other cases it is the boundary of the lands of the village, the town, or the clan, and in still others it is the boundary of the lands of the family as we now know it. In all cases, whether the lands of the tribe or village be held in common or in severalty, they must be protected against outsiders; otherwise the tribe or the village is in danger of starvation. The modern conception of property in land is property in severalty, which is commonly called individual property. Since, however, the head of a family cannot, generally, sell the land without the consent of other members of his family or their guardians, it seems that property in land is more of a family than of an individual affair.

Priority of possession. The practical situation out of which the institution of property in land grows may be described as priority of occupancy. Whether it be the nation, the tribe, or the individual which owns the land, it usually bases its claim against all comers upon priority of occupancy. Conquest is sometimes resorted to to destroy this claim. The world has never regarded this as just, but it has not always been able to prevent it. Having once conquered a territory, however, the

conquering tribe or nation can use its claim of priority against rival claimants in the future. Thus, we, in the United States, should certainly feel that we had a grievance if some upstart nation were to try to dispossess us as we long ago dispossessed the Indians.

However, we do not now own the land as a nation (except the public domain) but as families. The government recognizes the right of priority in awarding land to individuals. Under the system of voluntary agreement we have the right of free contract, of bargain and sale. Under this system the right based upon priority of possession may be transferred from one family to another a great many times. The subsequent owners base their claim upon the right of purchase, but it goes back to the fact of priority on the part of the first owner. If one will undertake to trace the title to a piece of land, he will discover how important a factor priority is.

The unattached versus the attached. In these matters we face the same practical necessity as the lower animals. Even certain shellfish, like the oysters, may serve as an illustration. The young of these shellfish pass through a free-swimming stage before they become attached to the bottom of the ocean. When one has become attached, his priority must, of physical necessity, be respected by young free-swimmers who are looking for a place to attach themselves. Presumably they have the power of swimming in order that they may "move on" and find new places to which to attach themselves. They may, in a sense, be said to pass through a stage similar to the pilgrim stage of our Eastern settlements and the prairie-schooner stage of our Western settlements. In all these cases it is the most vigorous, self-reliant, and courageous individuals who do the pioneering in new areas.

Tribal or national property differs in one important respect from individual or family property. In the former case the tribe or nation must defend its own property, there being no higher power to which it can appeal for protection against an

outside invader. In the latter case the individual or the family does not have to defend its own possession, but may call upon the state for defense. So important has this become that we are in the habit of speaking of property almost as though it consisted exclusively in this protection afforded by the state. Thus the individual may possess an object, but he is not said to have property in it unless the state recognizes his right to possess it and warns others not to meddle with it, undertaking to punish anyone who does. Moreover, the individual's property rights in a thing extend only so far as the state recognizes and warns others not to meddle. In some cases, for example, an owner of land is not permitted to exclude other persons from walking across it, in which cases those other persons are said to have right of way. There are numerous other limitations upon the property rights.

Human rights and property rights. Certain confused minds have attempted to make a distinction between human rights and property rights. The fact is, however, that all property rights are human rights. Strictly speaking, property has no rights and could not possibly have any. Human beings have rights in property. Property owners have rights in the things which they own.

While the original fact on which property in land and other natural objects is justified by the state is priority of possession, the basis of property in the products of industry is that of production, or, if it is not too strong a word, of creation. The boy who first finds and takes possession of a natural object of desire and the boy who makes or contrives another object of desire both feel pretty strongly that the objects belong to them. Both, however, recognize the right to transfer. Men feel very much the same way. The fact that one has made a thing is generally recognized as giving him a right to it. It is also recognized that he may transfer that right undiminished to another person, in which case the other person acquires all the rights possessed by the maker.

Kinds of property. Property may be classified, on the basis of the original method of acquiring it, into the three following groups:

- PROPERTY
  - Earnings
    - Things which one has produced
    - Things received in exchange for what one has produced
  - Findings
    - Natural objects found and appropriated
    - Things whose value has greatly increased while in one's possession
    - Things received by gift or inheritance
  - Stealings
    - Things acquired by the destructive and deceptive methods named in the outline in Chapter IV, page 60

The question of the moral right or the social expediency of private property, even in things which one has produced, has been discussed from very ancient times. In Plato's "Republic" it is argued that questions of mine and thine tend to divide rather than to unite the state. From that day down to the present there probably has never been a generation in which at least a small minority has not opposed private ownership.

Public or common property as compared with private or family property. So far as the pure morals of the argument are concerned there is as much to be said against public as against private ownership, unless the public is defined so as to include all mankind rather than a single tribe or nation. If it is held to be wrong for an individual to call anything his own to the exclusion of his brother men, on the ground that such conduct on his part would place a barrier between himself and his brethren and thus be contrary to the principles of the brotherhood of man, it is equally wrong, and for the same reason, for any tribe or nation to call anything its own to the exclusion of other tribes or nations. That is quite as much opposed to the principle of universal brotherhood as is private ownership.

III. The Family

The recognition of property, which follows automatically wherever the possessor of a thing is protected against dispossession through violence or fraud, tends to give the individual a chance to safeguard the interests of those for whom he cares most. If he had little or no family feeling, but strong tribal feeling instead, he would care more for the safeguarding of the tribe than for the safeguarding of his own family. In that case, tribal or communal property would be the logical thing. Each one would then have an opportunity to work in the interest of those for whom he cared most; that is, all his fellow tribesmen. In voluntarily disposing of his possessions he would naturally turn them over to the whole tribe. But when one cares more for one's flesh and blood than for other members of the tribe or nation, one is likely to work in the interest of the former. Private or family property is here the logical thing, because it gives to prudent persons the power to safeguard the interests of those in whom they have a powerful interest. Such persons have the strongest possible motives for accumulating property, and it is very much to the interest of the nation that everyone should accumulate property. That is one way by which the prosperity of the nation is promoted.

Some form of property inevitable. Whether we approve of private property or not, on grounds either of sentimental morality or of social expediency, we must make up our minds that it will continue to exist. The instinct of possession is so strong that no government could withstand it. One class may array itself against another, the propertyless class may outvote the propertied class, honestly supposing that it is doing so on grounds of broad humanitarianism; but experience has shown that the new class, when it comes into power, shows the same instincts and tendencies as were shown by the class which was in power before it. On these instincts and tendencies, rather than on philosophical theories, are governments and institutions built. Moreover, they must be built on such

foundations in order to be durable. Theories are easily changed and do, as a matter of fact, change frequently. Institutions built on theories must, therefore, be unstable. But instincts are hard to change and, as a matter of fact, change very slowly. Institutions based on these instincts may, therefore, be durable.

Property rights always limited. It must be observed, however, that such a thing as an absolute and unqualified right of property has never existed and does not now exist. No government undertakes to protect any individual in the unqualified use or abuse of anything which he calls his own. It may not permit another individual to dispossess him, or seriously to interfere with his use, but it will itself exercise that power whenever it deems it expedient to do so. The whole question of property is like every other question—it is subordinate to the public good. In so far as the private use or control of anything is thought to be advantageous to the general public in the long run, so far will a wise government protect the individual against outside interference with that use. This is as far as private property extends. Whenever or wherever the private individual's use or control of a thing is thought to be contrary to the public interest, there the wise government's protection will end. It is generally thought by the best students to be to the public interest that individuals shall be free to use their physical possessions, as they use their personal qualities, for productive rather than for destructive purposes. No wise government permits a person to use even his own muscular or mental strength without limit or qualification; but there appear to be as good reasons why he should be free to use and control his physical possessions as to use and control his personal powers, so long as he uses them productively. It appears, for example, as expedient that the farmer should be permitted to use his tools and implements for productive purposes as that he should be free to use his muscles or his brain.

Personal powers and physical possessions. There are, to be sure, important differences between one's personal powers and

one's material possessions; but these differences, however important they may be from other points of view, seem to have no importance from the point of view of productivity and usefulness on the one hand or of destructiveness on the other.

It was indicated above that what is sometimes called private property appears in certain cases to be family property rather than individual property. In fact, there is a much closer connection between that institution called the family and that institution called property than is ordinarily understood or appreciated. If we assume that the average individual has a deeper interest in his own flesh and blood than he has in other people, and if we admit that, on the whole, it is desirable that he should have this deeper interest, it is not illogical to permit him to make provisions for their special care and maintenance; otherwise we should compel him to work equally in the interests of all members of the community, even though he does not care equally for all of them. Again, if in his efforts to provide for them he conceives it to be wise to spend a part of his income for durable goods rather than for goods for immediate consumption, it will be difficult to state a satisfactory reason why he should not be permitted to do so. If we permit him to purchase these durable goods, and if we insist that he shall not be dispossessed without his consent,—in other words, if we continue to protect him in the possession of these durable goods,—we have the institution of property. If he did not care any more for his own flesh and blood than for all the other members of the community, there is no likelihood that he would care to own anything which might just as well be devoted to the use of all those for whom he cares. He would work just as hard in the interest of all members of the community or to accumulate material goods for their benefit as he will now work for the smaller family group or to accumulate goods for their satisfaction.

IV. Inheritance

But the care for one's own flesh and blood extends beyond the period of one's own life. One of the strongest motives for industry and thrift is the desire to provide for the needs or desires of one's offspring after one has ceased to live. This gives rise to the system of inheritances or of inherited property. When the state recognizes the desire to provide for one's offspring as a legitimate motive and undertakes to protect the inheritors of property in the same way that it protects anyone else who has come into the possession of a thing legitimately (that is, without force or fraud), then there will be inherited wealth, and the inheritor inherits all the rights of property which had belonged to the accumulator.

Inheritance and voluntary agreement. This is in harmony with the principle of voluntary agreement. Any piece of property which you can get from anybody else with his full and free consent and that of all the others who have any claim upon it, is yours as truly when you inherit it as when you buy it. Buying it is only one way of acquiring it with the full and free consent of the previous possessor; inheriting is another.

Inheritance and inequality. Under this system of inheritance, however, a situation will soon arise wherein a considerable number of persons will find themselves in the possession of property which they themselves never produced, earned, or purchased out of their earnings, whereas there will be others who can never come into possession of any property except by producing it, earning it, or purchasing it out of their earnings. This will doubtless begin to look unfair, and the unfortunate individuals who inherit nothing from their ancestors may begin to envy those more fortunate persons whose ancestors provided for them. A real conflict of interests is likely to grow out of this situation, giving rise to a serious problem in social justice.

Two methods of approach.[1] There are two points of view from which to approach the problem of inherited wealth. These methods

[1] From the author's "Essays in Social Justice." Harvard University Press, 1915.

of approach lead to such contradictory conclusions that it seems necessary to follow each in turn to its logical result and then see what can be done toward harmonizing them.

The point of view of the present generation. From the point of view of the present generation, or the generation which has accumulated the wealth in question, the following considerations will appeal to most men as reasonable. Assuming, to begin with, that a man has earned his income, there is no good reason why he should be compelled to consume it all and save none of it. In fact, it can easily be shown that it is very much better for society that he should save a part of it,—all of it, in fact, beyond what it is necessary that he should consume in order to maintain his working efficiency at its maximum. If he saves a part of his income, it is better that he should invest it in productive or useful tools rather than that he should hide it away. If he saves a part of his income and invests it wisely in useful or productive tools, there is no harm in allowing him some control over them; in other words, there is no harm in regarding them as his property. If they are his property, there is no harm in allowing him some freedom in disposing of them. If he chooses to give them away, it would seem inexpedient and unjust to forbid him to do so. And if he is to be permitted thus to dispose of them, there could be no harm in permitting him to give them to his children or near relatives rather than to strangers.

Some fortunes are earned. All this is, of course, based on the assumption with which we started; namely, that he has actually earned his income. If he has not earned it, the obvious thing to do is to correct the evil at the source by cutting off his unearned income. It would be exceedingly unintelligent to permit him to receive an unearned income, and thus build up a swollen fortune, and then try to correct the evil after he is dead by depriving his heirs of their inheritance. This unintelligence would amount to a crime if fortunes actually earned were swept away by the abolition of inheritances merely because some other fortunes were unearned. This would be worse than punishing the just with the unjust for sins which the unjust had committed; it would be punishing the *heirs* of the just and of the unjust for sins which the unjust had committed.

Looking at the question of inheritance apart from the question of the source of income, and looking at it also from the point of view of the generation which accumulates the wealth, there seems no good

reason why the individual who saves a part of his income and accumulates a fund of wealth should not be permitted to transmit it to his widow and orphans. How wide the circle of relatives should be who should be allowed a legal claim on the inheritance is another question. Undoubtedly it should be much narrower than is at present permitted. Since one of the strongest motives to accumulation is the desire to provide for the members of one's own family, and since accumulation is socially desirable, there is a positive reason why the right of transmission by inheritance should be sustained. One effect of the destruction of this right would be to encourage lavish consumption and discourage accumulation. Each man who loves to gratify himself would be tempted, somewhat more strongly than he is at present, to say, as soon as he had accumulated a competence, "Soul, thou hast much goods laid up for many years; take thine ease, eat, drink, and be merry." If he could not leave anything to his family, they would be just as well off if he were to consume his fortune as if he were to save it. Under such conditions, unless the law were evaded by gifts during the lifetime of the accumulator, capital, which is tools, would tend to grow scarce or increase less rapidly, industries to contract or to expand less rapidly, the effective demand for labor to decline and wages to fall, while interest would rise in response to the scarcity of capital.

The point of view of succeeding generations. Thus far we have considered the problem exclusively from the standpoint of the generation which accumulates wealth, forgetting succeeding generations. If, now, we consider the matter exclusively from the standpoint of succeeding generations, forgetting the generation which accumulated the wealth in question, the whole situation has a different look. From this new point of view we shall notice, first, that certain individuals—the inheritors of wealth—start in the race of life with a sum of capital in addition to their natural powers, while others start with nothing but their natural powers. It is obvious that the inheritors have an advantage in the race, and therefore it is also obvious that it is not a fair race.

What is fair competition? It is perhaps desirable at this point to consider the meaning of the word "fair" as applied to any form of competition. In a foot race, for example, the competition is sometimes said to be fair when all the runners are given an even start and given an equally good track on which to run. Of course there

will be great differences in the speed of the different runners, and it is certain that there will be great unevenness among the runners at the end of the race, even though they were all even at the start and all had equally good outward conditions. Inequality of results, when it can be attributed exclusively to inequality of power and not to an uneven start or any *outward* advantages or disadvantages, may, from this point of view, be considered fair.

Equal results. In other cases there is a deliberate attempt to predict the relative speed of the various runners and to arrange a series of handicaps in order that the race may be as nearly even *at the end* as possible. In this case they are deliberately given an uneven start in order that there may be an even finish, or a finish as nearly even as the handicap committee can arrange. If the handicaps are intelligently and fairly calculated, this kind of race also is said to be fair.

An even start. The same principles would apply to economic competition. If all the competitors were given an even start and if all were given a fair field with no favors, it would be called, from one point of view, fair competition. On the other hand, if it were possible to arrange a series of handicaps, giving each of the weaker competitors an advantage commensurate with his weakness, such a competition might also be said to be fair. The competitors would be given an uneven start and uneven advantage in order that they might be as nearly even as possible at the end of the race.

Handicaps. But it must be remembered that a system of handicaps must be intelligently arranged, otherwise it becomes outrageously unfair. If instead of giving some outward advantage to the slower runner it were given to the swifter runner, and the prizes awarded on the basis of the results of such a race, every sentiment of fairness would be outraged. And in the field of economic competition, if the handicaps were arranged in inverse order to the power of the competitors, everyone would say that it was unfair. Again, if the handicaps were arranged in a haphazard fashion, without any regard to the power of the competitors, so that the stronger were as likely as the weaker to be given an outward advantage, the case would be only a little better. No one would even pretend that it was a fair competition. This is exactly what happens to economic competition under the system of inherited wealth. From this point of view, forgetting the other, there can scarcely be two opinions on the subject.

Inheritances ought not to be allowed, because they make competition unfair. The strong competitor is quite as likely as the weak to be given the advantage of a fund of capital with which to start the race of life.

Compromising the two points of view. These two points of view, from which such opposite conclusions are reached, may be harmonized, or compromised, by considering the family rather than the individual as the unit of society, and considering the family as a permanent unit unaffected by the brevity of individual lives. We should then assume that economic competition takes place between families rather than between individuals. And the family being a permanent rather than a transitory unit, the race or the competition cannot be considered as having a beginning or an end. What is called the inheritance of wealth is, therefore, not to be considered as giving an individual an unearned advantage in competition so much as keeping in the possession of the family the advantage which it has already earned.

In proportion as one is in the habit of thinking in terms of the family rather than of the individual and of emphasizing the solidarity and perpetuity of the family and the unity of its interests, in that proportion will one emphasize the first point of view and minimize the arguments which are used against the inheritance of wealth. But in proportion as one is in the habit of thinking in terms of the individual rather than the family, or of thinking of the family as a temporary biological unit (beginning with marriage and ending with death) existing for the purpose of producing children and bringing them to maturity, in that proportion will one naturally emphasize the second point of view and minimize the arguments in support of the inheritance of wealth. Before considering the merits of the two conceptions of the family it is safe to record the fact that the undoubted tendency of popular opinion is away from the conception of the family as a solid and perpetual social unit and toward that of the family as a temporary, biological unit. There are even evidences of a tendency toward the purely individualistic conception which eliminates the family as an institution, though recognizing the necessity of a mating of males and females for the propagation of the species.

CHAPTER VII

THE QUALITY OF THE PEOPLE

What kind of people are we? However wisely the economic activities of the people may be controlled by government, morals, and religion, and however sound and rational their economic institutions may be, much will depend upon the quality of the people themselves. In fact, all these agencies in a democratic country will themselves be determined by the quality of the people. A wise and benevolent despot might conceivably give degraded people a much better government than they would ever originate, and he might even encourage a sounder system of morals than they would ever practice if left to themselves; but democratic people have no one to depend upon but themselves, and if they are of poor quality, there is no hope for them, because their system of control and their economic institutions are likely to be of poor quality.

How much civilization can we stand? There is a story of an aged savage who had lived since his early youth under civilized conditions, but who in his old age returned to his native tribe, saying that he had tried civilization for forty years and it was not worth the trouble. Much of the philosophy of civilization is contained, or at least implied, in his remark. Civilization consists largely in taking trouble. Civilized people are a great deal of trouble to themselves; and civilization will never seem worth the trouble to anyone whose mind is so constituted as to be incapable of taking trouble without great fatigue and irksomeness. It is more trouble to plan for the future than to live on the impulse of the moment; it is more trouble to save seed corn than not to save it; it is more trouble to invest one's income in productive enterprise than to consume it all as one goes along,—in short, it is more trouble to think, to plan, to exercise self-control, to direct one's conduct with a

view to one's needs ten or twenty years hence than to live wholly in the present, allowing the future to take care of itself. Of course it works better in the long run to take trouble of this kind. People who are willing to take this kind of trouble become civilized; people who do not, remain savages.

To one kind of person, with low mentality and little moral self-control, the alternatives present themselves of taking trouble every day with a view to his interests in the distant future and of refraining from taking trouble and facing hardship in the distant future. Which alternative he will choose will depend on the kind of man he is. If the hardships of the future seem less burdensome than the fatigue of taking trouble in the present, he will not take the trouble but will accept the hardships of the future. Such a man will never become civilized, or if he ever does become civilized he will ultimately decide, as did our aged savage, that it is not worth the trouble, and he will, therefore, relapse into savagery. On the other hand, an individual of higher mentality and moral self-control, when facing the same alternatives, will choose the other one. Taking trouble is not so very burdensome to such a person. Thinking, planning, subordinating the whim of the moment to the larger interest of the future, are easy to such a man. He will naturally, therefore, choose that alternative and will, almost automatically, become civilized. In the long run, therefore, the fate of our civilization will be determined by the kind of people we are, which will determine the kind of choices we make when facing alternatives of the kind mentioned.

Why man rules over the rest of the animal creation. In attempting to discuss the quality of the people we are not necessarily entering upon a discussion of the whole field of physiology, psychology, and morals. There are certain outstanding qualities which man possesses in greater degree than the brutes, which civilized man possesses in greater degree than the savage, and which, in any civilized community, the more successful classes possess in greater degree than the less successful. There are other qualities, such as the sense of smell and

the ability to endure pain, which certain savages seem to possess in greater degree than civilized man. If these were the important qualities, civilized man could scarcely claim superiority over the savage. Some savage races seem even to possess certain moral qualities in greater degree than civilized men. Travelers have frequently praised the honesty of certain tribes, their fidelity to their friends, their courage, and their fortitude. Civilized nations are each possessed of certain characteristic vices which can scarcely be apologized for, much less defended. One who thinks that the peculiar virtues of the savage and the peculiar vices of the civilized man are the important virtues and vices will certainly reach the conclusion that the savage is really superior morally to the civilized man. But it is very easy to be mistaken in one's emphasis. We need to consider carefully what qualities really give superiority to a people.

Our present problem is to form some sort of intelligent opinion as to the qualities which a people need in order to become prosperous, powerful, and great in an economic and worldly sense. The following outline is suggested as expressing a tentative opinion on this subject. Whatever may be said on purely religious or moral grounds, a nation whose people are possessed of these qualities in superior degree will have an economic advantage, other things equal, over a nation whose people possess them in less degree.

THE CHARACTERISTICS OF A CAPABLE RACE

1. Knowledge of
   - *a.* The physical environment
   - *b.* The social environment
2. Forethought, as shown by
   - *a.* Industry
   - *b.* Thrift
3. Dependableness, made up of
   - *a.* Honesty
   - *b.* Sobriety
   - *c.* Courage
   - *d.* Fidelity

4. Reasonableness, as shown by
   a. Eagerness to learn
   b. Obedience to law
   c. Willingness to coöperate

Man has achieved "dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth" by reason of certain powers or qualities which he possesses in higher degree than they. These are, first, his greater knowledge of and control over the forces of nature; second, his greater forethought in making provision for the future and working for distinct ends; third, his greater power of organization, or teamwork. This power of organization is the result mainly of two factors,—his dependability and his reasonableness. The same powers, or qualities, have given the civilized man dominion over the savage, and the intellectual man dominion over the ignorant man. In the future, as in the past, we must expect that the world will be ruled by the nations which possess these qualities in the highest degree.

Physical advantages over the brutes. Man's erect posture, leaving his hands free to be used for other purposes than locomotion, must be counted as a great advantage over the brute creation. A thumb which opposes the fingers and gives him a better grasp adds greatly to this advantage. These advantages, however, would not count for much if he did not have a mind which enabled him to devise tools to be grasped and used with his thumbed hands. So far as the upright posture and the thumb are concerned, while they give him an advantage over the brutes, they alone do not give the civilized man any advantage over the savage. The posture of the savage is as upright and his thumb as handy as the civilized man's. In seeking, therefore, the advantages which have given the civilized man dominion over the savage we must look at the mental and moral qualities. These are not necessarily physiological in their nature; they may be mainly the results of accumulated history, tradition, and training.

Intellectual advantages of civilized men over savages. Knowledge of the forces of nature may almost be said to include control over them, though the erect posture and the thumb assist in that control. Our physical environment includes not only the physical objects which surround us but their properties and the forces which govern them as well. To know our physical environment, therefore, means to know the properties of matter and the forces which operate in and through it. In short, this is to have scientific knowledge. It is this which underlies all our mechanical improvements. Our social environment includes human beings and all their powers, characteristics, habits, emotions, etc. A knowledge of one's social environment includes such a knowledge of man and his ways as to enable one to work with other men comfortably, knowing what to expect and what to depend upon. This is particularly important in those who are intrusted with the work of governing or administering the affairs of government.

Forethought. Forethought is only one aspect of what may be called the time sense. Among the many definitions of man is one which says that he is the being "who looks before and after." His memory of the distant past and his forethought for the distant future modify his actions in the immediate present more than the actions of any other creature are modified. But the past cannot be changed; only the future now lies within our control. Even industry is chiefly carried on because of the vivid appreciation in the present of those needs which are certain to arise in the future. Those creatures which appreciate future needs most vividly will, of course, labor most assiduously. The same difference shows itself among men. Those nations, as well as those individuals, who see most clearly in advance what their future needs are likely to be are the nations and the individuals who show the greatest industry as well as the greatest thrift.

Thrift. Thrift differs from industry in that it consists in saving that which is already produced or possessed, whereas

industry consists in producing or gaining possession of desirable objects. Even more than industry, thrift is a mark of forethought. It requires an even stronger self-control, combined with a keener sense of the importance of future needs, to lead one to refrain from consuming that which is already produced than it does to work to produce that which does not yet exist. However, the two things must always go together, in the community at least, if not in the individual. The farmer, that is some farmer, must save seed before any farmer can labor successfully at the growing of next year's crop. One may, however, save the seed which another plants. There are some savages so thriftless as not to be able even to save seed. Needless to say, their industry, even if they were industrious, would not count for much. If cattle are benevolently given to them, they kill them all in time of scarcity. Therefore they cannot succeed even as herdsmen, but fall back into a lower economic stage; namely, hunting and fishing. Such people are not likely to grow powerful enough to occasion much uneasiness to the rest of the world. Even if there were no other reasons for their weakness, they could never support numbers enough to be very strong.

Knowledge and forethought are primarily mental qualities, though there is an element of morality in forethought; dependableness and reasonableness are primarily moral qualities, though there is an element of mentality in both of them. In this age of great mental achievements, especially in the field of physical science and mechanical invention, there is a tendency to underestimate the importance of moral qualities. This tendency may have been increased by the perception that moral teachers themselves have sometimes overemphasized the lesser virtues—that is, those which count least in the improvement of social life—and underemphasized the greater, that is, those which count most.

Moral advantages of civilized men over savages,—dependableness. Nothing can be more important in the building of a great and prosperous nation than dependableness. Many writers

have taken pains to point out how dependent we are upon one another in a highly civilized state. One way of illustrating this mutual dependence is by comparing a highly developed society to a complicated machine or a highly developed animal organism. There are many striking resemblances, among the most important of which is the interdependence of parts. This interdependence of parts increases as we ascend in the scale of organic life. In the human body, for example, or in that of any of the higher mammals the interdependence of parts is much greater than that found in the bodies of the lower forms of life. The same change is noticeable as we ascend in the scale of social life. Each individual tends to specialize in some particular kind of work and to depend upon other individuals, who have specialized on other kinds of work, to supply him with goods and services which he cannot produce for himself. Some of the reasons why this is so advantageous will be discussed in the chapter on The Division of Labor.

There can be no great amount of dependence of one upon another where the people are not dependable. This is equally true of a machine or an animal organism, but we do not attribute moral qualities to the parts of any of them. The wheel in a machine has no choice. It must of physical necessity do whatever its construction requires it to do. But if the machine be not well made, so that some part is not compelled to work harmoniously with every other part, the whole machine will work very imperfectly or not at all. Similarly, if one part of the animal organism, especially of a highly developed organism, should fail to perform its functions, every other part is likely to suffer, and the whole organism may even die. Although there is no physical necessity compelling a person to be dependable, as is the case with the parts of a well-made machine or the organs of a healthy body, yet it is just as important that he should be, otherwise civilization cannot advance at all.

Our mutual dependence is of various sorts and degrees. If someone fails to do that which he is expected to do, he may imperil the lives of hundreds or thousands of his fellow men,

as in the case of a switch tender or a locomotive engineer; he may occasion the loss of valuable property; or he may, as in the case of an unpunctual person, merely upset our calculations and cause many of us to waste our time waiting for him or guessing what he is likely to do. In all these cases, in greater or less degree, he occasions loss to the nation. The time we waste on account of his lack of dependableness is as truly a loss as the property which is destroyed. Aside from the direct loss of time and property, there is the greater loss which comes from the discouragement of enterprise, the lack of confidence, and the general demoralization which ensues when men can no longer rely upon one another. When we can no longer depend upon others to do their special work well and regularly, we shall have to learn to do everything for ourselves.

Honesty. The first element in dependableness is common honesty. Men who will not keep their word, fulfill their contracts, or do business without cheating are not only morally odious, they are also obstructions to the progress and prosperity of the community. Perhaps this is why they are morally odious. A community made up of such people, no matter how gifted they might be mentally, could scarcely prosper. No one could trust anyone else, consequently there could be no credit. Nothing could be bought or sold without the closest and most minute inspection, and this would be laborious and therefore wasteful of time. There could be no coöperation or teamwork, but everyone would have to look after himself and spend a great deal of time watching his dishonest neighbors. Among the many advantages of honesty, therefore, not the least is that it is a great labor-saving device when it is practiced throughout a community. Of two communities which are otherwise equal, the one within which honesty prevails will advance more rapidly in prosperity and power than the one in which dishonesty prevails.

Sobriety. Next to honesty, sobriety is probably the most important element in dependableness. In a rudimentary state of society, where each individual works and acts most of the

time alone, and where, therefore, there is little interdependence, drunkenness may not be so vicious as it has now become. In our interlocking civilization no personal habit or vice so unfits a man for usefulness as drunkenness. If you had to take your choice between riding behind a locomotive engineer who was addicted to drunkenness and riding behind one who was addicted to any other vice, there is not much doubt as to which you would choose. If you had to take your choice between a chauffeur who was in the habit of getting drunk and one who had formed any other bad habit whatsoever, you would not be likely to take the drunkard. Apply a similar test to anyone in any of the hundreds of responsible positions and you will reach the conclusion that the person who is addicted to drink is about the least desirable citizen you can name. There are fewer places where he is of any use and more where he is a menace than is the case with the victims of any other vice. Whatever you may think when you are discussing, in the abstract, the relative harmfulness of various vices, you are not likely to be much in doubt when you come to a concrete case like that of a locomotive engineer, a switchman, a driver of an automobile, or even a janitor or anyone else whose lack of dependableness might endanger your life. Sobriety must obviously rank high among the virtues which go to make up what we have called dependableness.

Courage. Courage is the father of many virtues, as fear is of many vices. It is probable that as many falsehoods result from fear as from malice. In any kind of emergency you will want dependable companions who will not fail you. Their dependableness will be in proportion to their courage. Even your own courage may depend partly upon their courage, and theirs upon yours; that is to say, when you feel that you can rely upon one another you will all feel more courageous and more capable of coping with a difficult situation than if each of you doubts the courage of the others. This applies not only to physical courage in a time of physical danger but to moral courage in times when the larger interests of society are at stake. Men of

little courage fear to come out on the right side, and even men of real courage have their confidence shaken by the feeling that they cannot depend upon their fellow citizens.

Fidelity. Fidelity is closely related both to honesty and to courage and serves much the same purpose. It is the quality which keeps faith even though one might gain some individual advantage by breaking faith. The habit of breaking faith or abusing confidence demoralizes a group or a community and makes any kind of effective teamwork impossible.

There are doubtless many other elements which contribute to the dependableness of a people, but the four mentioned are the principal ones. Any group of people who possess these four in high degree can rely upon and coöperate with one another and carry out any form of teamwork which they have the intelligence to plan. A community whose people are weak in any one of these four qualities will have difficulty in carrying out any effective scheme of group action, no matter how clearly they perceive the advantage of doing so. While these are moral qualities, nevertheless the economic prosperity of the nation depends upon them. They are, therefore, of just as much interest to the economist as good tools, good land, or any other factor.

Reasonableness. Reasonableness is a noticeable characteristic of progressive people, as its absence is of unprogressive people. It includes freedom from prejudice, passion, and superstition, and willingness to take a sensible view of things and to be guided by sound judgment rather than by stubbornness and general contrariness. It is opposed equally to the slavish following of old customs, on the one hand, and blind and headlong pursuit of new fads, on the other. It involves a frank recognition of all the necessary conditions of social life and teamwork and a willingness to submit to those conditions even at some inconvenience to self. It involves the willingness to help in any genuine reform movement, even at some loss or danger to self, and likewise a recognition of the necessary and legally constituted methods of effective reform.

Teachableness. The first element in reasonableness is teachableness, or eagerness to learn, especially to learn better ways of doing the work which we have to do. Travelers among backward races give many strange accounts, not simply of the ineffective methods of work, which we might expect, but of the unwillingness of the people to learn new ways even when they are shown. One railroad builder who was forced to employ native labor in a backward country, which need not be named, found that they were accustomed to carry all burdens on their heads. In moving dirt they insisted even on carrying it in boxes and various receptacles on their heads. He supplied them with wheelbarrows and gave orders that they were to use these and nothing else. They used the wheelbarrows, but carried them also on their heads; and nothing could induce them to change their immemorial custom. Another story from another backward country relates how an enterprising American undertook to substitute some well-made American carts for the exceedingly clumsy and inefficient carts then in use. The native teamsters refused to adopt the innovation, giving as their reason that the new carts were too silent, that they missed the screeching made by the wheels turning on the heavy wooden axles of their old carts. Similar illustrations could be repeated by the hundred if necessary. No nation whose people are so unteachable as these illustrations indicate is likely to become prosperous, or great in any sense, no matter how well endowed it may be with natural resources. Such nations will always remain at the mercy of the stronger nations and will survive only because their stronger neighbors show enough moral self-restraint to refrain from conquering them.

This difficulty is not simply a lack of knowledge. It is more fundamental than that. It is a habit of mind which resists knowledge,—which refuses to accept knowledge even when it is presented. Whether this is due to some defect in the physiology of the people or merely to bad teaching in the past it may be difficult to determine. That there are constitutional differences of this kind among peoples there can be little reasonable

doubt. To some the pain of a new idea is so considerable that they prefer to endure poverty and hardship rather than the painful process of learning better ways of doing things. To others the painfulness of learning is so slight as to place no obstacles in the way of progress. On the other hand, a wise but strong ruler who would establish a system of compulsory education and rigidly enforce it could doubtless accomplish a great deal in the way of increasing the teachableness of the people. During their enforced schooling they would form the habit of learning, and the pain of a new idea would be greatly reduced. A wise majority in a democracy might do the same thing for an unwise minority.

Even in what passes for a progressive nation and among people who are ranked as moderately intelligent there survive many practices which can be regarded only as superstitions. Some farmers still plant their potatoes in the dark of the moon rather than when the soil and the weather conditions are right. Others observe ceremonies of various kinds which have not the slightest relation to the laws of plant or animal growth. Still others refuse to submit to rules or to adopt practices which have been proved to have scientific value, either because it is contrary to their religion or because it is not the way they and their fathers have always done. Among others besides farmers there is sometimes a prejudice against "book learning," even after the book learning has proved itself a practical thing.

Covetousness. There is another form of unreasonableness, and it is probably the most destructive of all, which takes the form of jealousy or resentfulness at the success of other people. It is the worst form, perhaps the only real form, of covetousness. There are few things which so deaden the enterprising and constructive spirit of a people as this form of resentfulness, and there are few things which so encourage that spirit as a generous appreciation, on the part of everyone, of real achievement wherever it is found.

Obedience to law. Another important element in reasonableness is the recognition of the fact that if we are going to live

together in groups it is necessary for each of us to submit to many regulations, some of them at times irksome, which would be unnecessary if we could live as isolated individuals. This is commonly called obedience to law. This need not be a slavish acceptance of all laws as they now stand, but it at least involves a recognition of the orderly and legally constituted methods of changing laws, rather than a stubborn and brutal defiance of those which we do not happen to like. The purpose of law is not to repress or obstruct, but to make free,—to release energy. The traffic policeman on a crowded street corner may be taken as a good illustration of all enforcement of law. He is not there to obstruct or hinder traffic, though he undoubtedly does hinder some unreasonable people from doing what they would like to do. But as the result of such hindrances traffic can move more freely than it could without them, and thus the average person actually enjoys greater freedom of movement than would otherwise be possible. A reasonable person always recognizes this fact and submits to such regulations. Only an unreasonable person finds them irksome or refuses a willing obedience.

The world has generally been dominated by peoples who were law-abiding. No nation whose people refuse to submit to the necessary regulations could ever hope to grow prosperous or powerful enough to play much of a part in civilization. It would be as reasonable to expect a disorganized mob, each individual of which followed his own whims, to succeed against a well-organized and well-disciplined army. The type of discipline and regulation is different, but the necessity is just as great in a nation at peace as in a nation at war. The results of a lack of discipline come more quickly in war than in peace, but they are no more certain in the one case than in the other. It is particularly important that this kind of reasonableness shall exist in a democracy. Under a despotism the subjects may be compelled by fear to submit to regulations; in a democracy submission must be largely voluntary. In other words, it depends upon the reasonableness of the people.

Willingness to coöperate. Willingness to coöperate where coöperation is desirable, even without legal compulsion, is a very important factor in the prosperity of any community. Even where everyone agrees that coöperation is needed it is frequently difficult to get people to coöperate for community work. The reasons are many, and some of them are hard to understand. Personal jealousies, old grudges, mutual distrust, and even general all-round meanness are given as the principal reasons. It is sometimes said that the lack of leaders is the great difficulty. It is quite as frequently the lack of followers. Everyone wants to be a leader and is not willing to follow anyone else. One of the vices of democracy shows itself in many coöperative enterprises. Instead of supporting a leader who really knows what ought to be done and how to do it, it frequently happens that the only leader who can win support is the one who can wheedle the different factions into a coöperative mood. His fitness does not consist in the fact that he is an expert in the work which is to be done by the group, but in the fact that he is an expert in the arts of persuasion,—that he is the only one who can overcome the unwillingness of the various factions to coöperate. If they were willing to coöperate this sort of leader would not be a necessity, and they could then choose a leader who was an expert in the work to be done.

Even in the larger sense the nation is weak if it must be led by one who knows very little about the actual business in hand, but knows only how to placate various factions and persuade them to undertake the work before them. With such a spirit among the people the indispensable man is more likely to be the orator or the persuader than the statesman or the administrator. A people among whom the efficient man is popular will never be outstripped in the arts of peace or beaten in war by a people among whom only a demagogue or even a persuasive orator can be popular. A people who lack the willingness to coöperate in the carrying out of great national plans and programs must be persuaded or placated. Lacking a despot, their

first need is for someone who can wheedle them into doing that which they ought to be willing to do without wheedling. Nothing more unerringly indicates the quality of the people than the kind of leaders they pick out or follow. If they habitually allow themselves to be led by men who are proficient merely in the arts of persuasion, they are a weak people. Even that which is sometimes called executive ability and which is too often a convenient excuse for much stupidity is made necessary mainly because people are too weak and vacillating to do what they ought to do without a great deal of looking after. If the people choose as their leaders men who have clear and sound ideas and marked scientific or constructive ability, regardless of their proficiency either in the arts of persuasion or in the bluster of the "great executive," they are a strong people. As the late William James pointed out, one of the purposes of an education is to enable us to pick out a good man.

If we are clear in our minds as to a few of the leading qualities which a capable race must possess, the next question is, How may a nation improve or preserve its capacity for greatness? Our original qualities depend mainly upon heredity; our acquired qualities, upon education. Education depends mainly upon the educational system and the advantages which civilization provides for the accumulation and transmission of knowledge. Few of us, unless we have thought seriously about it, realize how much of our present knowledge is due to the art of printing. By means of the printed book the knowledge acquired by one generation may be stored up and bequeathed to future generations. Without the printed book it would have to be transmitted from generation to generation on the thin air by means of the spoken word. Much that is wonderful has been transmitted orally, but much also has been lost. Such a thing as a lost art is scarcely possible in this age of printing presses. But while much of our knowledge is due to the art of printing, more, perhaps, is due to the organized plans for training each generation during its growing period. A school

system which gives each and every child just the training which he needs to fit him for the greatest usefulness is the dream of all educators.

Heredity and training. A great deal has been written regarding the comparative importance of heredity and training in the determination of ability and character. Some have gone to the extreme of saying that heredity is everything, that a genius will always become a genius in spite of the lack of educational advantages,—in short, that he will find his own means of education. Others have gone so far as to deny that heredity has anything to do with a man's ability; they claim that it is all in his education, including under education all the influences that have been at work since his birth in developing his mind and shaping his character. The truth, as in most such cases, seems to be somewhere between these extremes. There is no doubt whatever that men of average natural ability may be greatly improved by education and training, nor is there any reasonable doubt that some are capable of being trained much more highly than others because of a difference in natural ability.

If we consider certain special fields of study—for example, music or mathematics—few will doubt that there are differences in natural talent for these studies. Any normal person can acquire some skill in either of these fields, but there are some who are so deficient in natural talent for one or the other that no amount of training would ever enable them to become highly proficient. There is a strong probability that the same may be said of any special kind of ability or skill which might be named, but in our complex civilization so many kinds of ability and skill are required that almost anyone can find some field of work in which he may become skilled, though there may be no good market for the kind of work in which he excels or there may be so many others possessing the same kind of ability as to overstock the market. In either case the individual, however skillful or capable in that special field, may find it hard to make a living.

Whatever may be said regarding the relative importance of the natural ability of the people and their training, it is absolutely certain that it is more important for the present generation to give attention to the problem of its own training than to the problem of its own heredity. The latter cannot now be changed, and there is no use worrying about it. The only thing to do is to make the most of its inheritance and see that it gets the best possible training. But when we look to the future, there is much to be said in favor of giving attention to the question of the heredity of future generations. If the most capable men and women of this and succeeding generations marry and have larger families than the less capable, and if the least capable, the feeble-minded, and the defective are prevented from reproducing their kind, we may expect a gradual improvement, generation after generation, in the native and inherited quality of the stock. If, on the other hand, many of the most capable do not marry at all, and if the others marry late and have small families, whereas the less capable have larger families, while the feeble-minded and defective multiply most rapidly of all, we must expect a gradual deterioration in the stock, generation after generation.

The age of marriage. Aside from the difference in the size of families the mere difference in the age of marriage will make a great difference in the rate of increase of different classes. Let us suppose, for example, that there are two groups of people, which we will call groups A and B, containing a thousand persons each, each group having different habits with respect to the age of marriage. In group A marriage takes place so early, on the average, that there is an average of twenty-five years between generations. That is, the average parent is just twenty-five years older than the average child, enough children being born before the parents are twenty-five to balance those who are born afterward. In group B, on the other hand, marriages take place so late that there is an average of thirty-three and a third years between generations. Let us assume, further, that the number of children brought to maturity in the average family is

the same in the two groups, and that this average number is four; that is, in both groups the average married couple brings four children to maturity and marries them off. The total number in each group, therefore, doubles in each generation. But group A will double four times in a hundred years, whereas group B will double only three times. Under these circumstances group A will have increased from one thousand to sixteen thousand at the end of a hundred years, whereas group B will have increased to only eight thousand. If, in addition to this, group B should have fewer children on the average, so that they doubled only once in two generations, the contrast would be still greater. In this case they would number fewer than three thousand at the end of a hundred years. If, through so many failing to marry at all and the rest having so few children, they should not increase at all from generation to generation, the two groups, at the end of the century, would bear the ratio of 16 to 1. Now it is rather obvious, is it not, that it makes a great deal of difference whether group A represents the more capable men and women in our nation and group B the less capable, or vice versa?

CHAPTER VIII

THE GEOGRAPHICAL SITUATION

The human factor is the most important factor in national prosperity. Nevertheless the natural situation is a factor which must be taken into consideration. However gifted and courageous a race may be, it will find it easier to expand and become prosperous, powerful, and great in a favorable than in an unfavorable environment.

Importance of environment. But what is a favorable environment? It is easy to overemphasize the bodily comfort of living in a warm as opposed to a hot or a cold climate and to ignore the bracing effects of changeable weather. It is also easy to overemphasize the tremendous productivity of certain tropical regions and to forget that they produce the enemies as well as the friends of man in great profusion. It is equally easy to go too far in the opposite direction and to hold that hard conditions, such as a harsh climate and a sterile soil, are best for man's development. If hard conditions are all that men need the Eskimos of the Far North are peculiarly blessed.

Advantages of the temperate zones. If we take everything into consideration it is probable that the temperate zones are most favorable to man's development, as well as to his prosperity. He has here fewer unconquerable enemies than in the tropics or in the frigid zones. He finds a wider variety of useful materials, such as grass, timber, and minerals, and he finds them in greater abundance here than elsewhere. Here the advantages to be gained by work are more obvious and more easily comprehended by the average intellect than anywhere else. The intelligence required to see the advantage of building shelters, making clothing, and kindling fires, especially in a

place where, along with the cold weather, there is an abundance of material suitable for these purposes, is not very great. It requires much more scientific knowledge to enable men to guard against the hookworm and the various harmful bacteria which infest the tropics. These, together with venomous insects and reptiles, not to mention the larger beasts of prey, imperil the lives of the dwellers in the tropics quite as much as our cold winters imperil the lives of dwellers in these northern latitudes.

Northern-grown crops are generally best. It is a fact of observation, however we may account for it, that many of our farm crops reach their highest perfection very near the northern limits of the areas within which they can be grown without injury from frost. The Cotton Belt of this country, though confined to the Southern states, is in reality near the northern limit for cotton. Our Corn Belt is likewise near the northern limit for corn. The oranges of California and Florida are likewise grown near the line where frost will destroy the crop. The potato and the sugar beet do better either in high altitudes or in high latitudes, where the summers are barely warm enough and the seasons barely long enough to mature the crop. One explanation of this general rule is that by migrating northward a plant escapes many of its ancient and hereditary enemies. When seed corn is saved, dried, and protected during the winter, and special care given it during the growing season, it can grow farther north than would be possible if it had to shift for itself. Its natural enemies in its original habitat, not having man's help, cannot live over winter or mature between frosts in our Corn Belt. Therefore the corn plant escapes some of its worst enemies. The same is true of the cotton plant, though some of its ancient enemies seem to be following it northward, and also of other plants which seem to flourish under cultivation in latitudes where they could not survive without cultivation. This is one important factor in enabling large numbers of men to produce an adequate food supply in northern latitudes. Similarly, when man learns to keep himself warm by building houses,

manufacturing clothing, and making fires, he can live in latitudes which enable him to escape some of his ancient and hereditary enemies, such as the hookworm and the germs of yellow fever, malaria, etc. The northern limit of his best development, however, must coincide with the northern limits of the production of abundant means of satisfying his multifarious desires. Another advantage of growing food crops as far north as the seasons will permit is that during the summer the days are longer in high than in low latitudes. This gives plants more light while they are growing. The proportion of sugar in sugar beets, for example, seems to depend partly upon the amount of sunlight which they get while they are growing.

Buckle's generalizations. In his famous work "The History of Civilization in England" Henry Thomas Buckle makes a great deal of several other factors in the geographical situation. These he groups under four heads; namely, climate, food, soil, and the general aspect of nature. He goes to the extreme of attributing to these factors a controlling influence not only on the economic prosperity of the people but even on their intellectual, moral, and religious development as well. Without following him to these extremes we may profitably give attention to some of his observations regarding the influence exercised by these factors on the industrial development of a people. No one is likely to deny that the presence of cheap coal has had a great deal to do with the economic development of Europe and America, or that the former abundance of timber in this country had a great deal to do with the kind of houses we built and are still building. A shingled roof, for example, is unknown except in countries where timber has been abundant.

That ancient civilizations arose in regions where labor applied to land was highly productive is a commonplace in history. The fertile river valleys of Egypt, Mesopotamia, India, and China supported civilizations when our European ancestors were still savages. Here food was so abundant that men had time to do other things besides satisfying their immediate daily needs; or, rather, a part of the population could produce food

enough to support the rest while the latter gave their time to other things. Art, architecture, philosophy, religion, and government could, therefore, flourish. The civilizations which have grown up since then in latitudes farther north may not have exceeded those earlier civilizations in physical magnificence, but they have exceeded them in all that makes for the comfort and well-being of the average man.

On the other hand, the overpowering influence of the terrific productiveness of nature in certain tropical regions is sufficient to discourage man's enterprise. Kipling's story entitled "Letting in the Jungle[1]" gives a vivid picture of the way in which the jungle struggles to reassert itself,—to flow back, as it were, upon a cleared area and overwhelm it as with a flood of rank vegetation. Concerning India, Buckle writes:

> Besides the dangers incidental to tropical climates, there are those noble mountains which seem to touch the sky, and from whose sides are discharged mighty rivers which no art can divert from their course and which no bridge has ever been able to span. There, too, are impassable forests, whole countries lined with interminable jungle, and beyond them, again, dreary and boundless deserts,—all teaching man his own feebleness and his inability to cope with natural forces. Without, and on either side, there are great seas, ravaged by tempests far more destructive than any known in Europe, and of such violence that it is impossible to guard against their effects. And as if in those regions everything combined to cramp the activity of man, the whole line of coast from the mouth of the Ganges to the extreme south of the peninsula does not contain a single safe and capacious harbor, not one port that affords a refuge which is perhaps more necessary there than in any other part of the world.

In contrast with India, Buckle points to Greece as a country where everything invites man to dominate. There is nothing to terrify or overwhelm him. Everything tends to exalt the dignity of man, while in India everything tends to depress it.

The zone of the founders of religion. Peschel, in his "Races of Man," quotes from an old Arabian geographer who divided

[1] In "The Second Jungle Book."

the earth into zones, one of which, that between 19° and 33° 49′ north latitude, was the zone of the founders of religion. He points out that in this zone were born all the great founders of religion and all the philosophers and scholars, himself included. Zoroaster, Moses, Buddha, Christ, and Mohammed were all born in that zone. Regarding the influence of the desert upon the mind, Peschel writes:

> All who have been in the desert exalt its beneficent influence on the health and spirits. Aloys Sprenger declares that the air of the desert invigorated him more than that of the high Alps or of the Himalayas. . . . The desert has impressed the Arabs with their remarkable historical character. In the boundless plains the imagination which guides the youth of men is filled with images quite different from those suggested by forest country. The thoughts thus acquired are noble rather than numerous. . . . Every traveler who has crossed the deserts of Arabia and Asia Minor speaks enthusiastically of their beauties. All praise their atmosphere and brightness and tell of a feeling of invigoration and a perceptible increase of intellectual elasticity; hence, between the arched heaven and the unbounded expanse of plain, a monotheistic frame of mind necessarily steals upon the children of the desert.

Professor Ellsworth Huntington,[1] on the other hand, finds greater stimulus to mental activity in a changeable climate with frequent variations of temperature.

The geographical advantages of the United States. Coming to our own country, we have a combination of most of the geographical factors mentioned by Buckle and others. We have the broken landscape, low mountain ranges, and small rivers of the Atlantic seaboard; the great fertile valley of the Mississippi and its tributaries, the vast plains of the great West, the semidesert conditions of the Southwest, the towering mountain ranges of the Rockies and the Sierras, and the mild climate and gentle slopes of the Pacific coast. If the mind of man is strongly

[1] The Pulse of Asia. See also "Climatic Changes and Agricultural Exhaustion as Elements in the Fall of Rome," *Quarterly Journal of Economics*, February, 1917.

influenced by its geographical surroundings, we have an opportunity of developing a many-sided and variegated civilization.

The eastern half of the United States, being virtually surrounded on three sides by water, like the greater part of Europe, is assured of an adequate quantity of moisture; the western half is more or less deficient in moisture, except the extreme northwest corner and certain high mountain altitudes. These arid and semiarid regions, where the streams do not supply water enough for irrigation, may, in places where conditions are favorable, be made to grow crops under methods known as dry farming. The rest will probably be a permanent grazing country. Even our irrigable land, while but a fraction of the total, amounts to a small empire in itself.

A broad strip running from the Atlantic seaboard to the hundredth meridian, and a little north of the middle, comprises the great grain, hay, and live-stock region. Another broad strip, lying south of this, is the Cotton Belt. Along our northern border from Maine to northern New York is a lumber, dairy, and potato region and a natural summer playground for the city people. A continuation of this strip, including the northern halves of Michigan, Wisconsin, and Minnesota, is an undeveloped region, formerly covered with forest but now largely cut over. Most of it is excellent land for potatoes and small grains and is capable of feeding a vast population. Another undeveloped strip along the Gulf coast from Florida to Texas, just south of the Cotton Belt, is also largely cut-over timberland. Much of this is ideal land for fruit and truck farming and the growing of such great food crops as sweet potatoes and peanuts. Whenever the demand for food is such as to insure a remunerative price for potatoes, both white and sweet, almost unimaginable quantities can be grown along our northern and southern borders without interfering with the growing of corn, wheat, or cotton in the belts which are especially adapted to these great crops. So far as starchy food is concerned we have opportunities for producing incalculable quantities. Animal products also can be produced in quantities sufficient for a pop-

ulation very much greater than the present, though it is easy for unthinking people greatly to exaggerate the possibilities in this direction.

The Mississippi Valley (that is, the whole interior basin of the country) is one of the most productive regions in the entire world. In fact, it is doubtful if any region of equal area can be found anywhere on the globe which contains so great a variety and abundance of natural riches, both on the surface and beneath the surface. This region includes the greater part of our Cotton Belt, and we produce nearly three fourths of the cotton of the world. It includes all of what is known as our Corn Belt; that is, the region where corn is the main crop, though corn is grown in every state in the Union. Corn is not only our most valuable crop but our most valuable single product of any kind or description; we also grow nearly three fourths of the world's production of this, the most magnificent of all crops. In this region also are the great spring-wheat areas of Minnesota and the Dakotas and the winter-wheat area extending from Ohio to the Great Plains, reaching its greatest density in Kansas and Nebraska. While we produce on the average only between a fourth and a third of the world's total wheat crop, we yet produce more than any other single country at the present time. Aside from these major crops, this region is also rich in a number of minor crops and grows practically everything which will grow outside the tropics.

Farm machinery. The reasons for this great productivity are, first, the vast area; second, the uniform fertility of the soil; third, the uniformly level contour, making farm operations relatively easy and inexpensive; fourth, the uniformly favorable climate; and, fifth, the general use of farm machinery. There is probably no single area in the world where so much and such efficient farm machinery is used in order to supplement the labor of men.

In addition to the natural ingenuity of our people, the general smoothness of the land and the favorableness of the climate must be held to account for the use of farm machinery. The

summers (especially the late summer months) in this region are relatively dry. This has had an important effect in encouraging the use of harvesting and hay-making machinery. In some of the countries of northwestern Europe, where clear, dry weather is rare, the curing of hay and the drying of harvested grain are more difficult problems than with us. The quick curing and rapid methods of harvesting and storing which are familiar to us are there impossible.

Not the least important feature of the geographical situation of any country is the opportunity which it offers for specialization. This is sometimes called the opportunity for trade and commerce. Trade and commerce, however, are good only because they enable each country or each neighborhood to specialize in production; that is, to produce the things for which it is best fitted. This would not be possible without trade and commerce. That is to say, each neighborhood would have to produce everything its people needed if it could not get some of these things from other neighborhoods. When it can get almost anything it needs from other neighborhoods, provided it has something to give in exchange, it can then devote its own energies and resources to the production of those things in which it excels, or for which it is best fitted, and exchange its surplus of those things for other things which it happens to need. Specialization in production depends, therefore, on opportunities for trade and commerce.

A wide area with great diversity of geographical conditions, such as differences of temperature, rainfall, altitude, soil, and mineral deposits, permits great specialization, provided the different localities can exchange products. This is largely a matter of transportation. A small area, with little diversity of resources and, at the same time, isolated with respect to transportation, would be at a great disadvantage. With little diversity of natural resources it would have difficulty in producing everything it needed. Isolated with respect to transportation, it would have difficulty in getting from the outside the things it could not produce at home.

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PART II. ECONOMIZING THE FACTORS OF PRODUCTION

CHAPTER IX

THE INTERRELATION OF THE FACTORS OF PRODUCTION

However strongly we believe that this is the best possible world and however clearly we see that a bounteous nature has provided for the satisfaction of many of our needs we cannot help acknowledging that, at any time and in any place where we happen to be, some desirable things are scarce, some undesirable things are abundant, and some things otherwise desirable are so superabundant as to become undesirable. That being the case, the obvious thing to do seems to be to set about improving the situation, increasing the quantity of those desirable things which are scarce, and decreasing the quantity of those things which are too abundant for our well-being or comfort.

The rearrangement of matter. Matter itself cannot, of course, be either increased or diminished in quantity. It can be rearranged in such ways as to become more usable or less harmful. This rearrangement may take on various forms. All the elements which are now in a loaf of bread were formerly in the soil, the water, and the atmosphere. In those forms they were of no use to man. They have been rearranged and assembled,—their form has been changed. This is sometimes called form-utility. The wheat from which the flour was made and the flour from which the bread was made had to be transported from places where there was a superabundance to a place where there was a scarcity, in order that they might become usable. This is sometimes called place-utility. Some goods have to be stored and preserved. At one time they are so abundant as to be unusable. At another time, unless they were preserved, they would be so scarce as to cause hardship or even famine.

Their utility is increased by storing and preserving them. This is sometimes called time-utility.

Time is important as well as place. A keen observer has remarked that men are engaged in the simple work of moving things from one place to another. Whether they are writing with pens, putting chemicals into test tubes, rolling steel rails, draining swamps, or irrigating dry land, all that men literally do with their hands and their muscles is to move materials. They are changing the space relations of things. This observer, however, did not see that men are also changing the time relations of things, a process which is quite as important as changing their space relations. Things must not only be moved from one place to another, they must also be preserved and held from one time to another. The time relations of things are quite as important as their space relations.

Of course there are methods and purposes in all this moving of things. The mind sees method and purpose where the eye sees only materials moving. One of the wonderful things about man's activity is the vast results that follow a very slight rearrangement of materials. By stirring the soil and placing seeds in a certain relation to it, the forces which produce plant growth are set to work supplying our needs. By rearranging a few stones and clods a stream may be diverted and made to water barren fields until they blossom and bear fruit, or the stream may be made to turn a wheel and drive machinery which can accomplish tasks far too great for human muscles. By taking advantage of his knowledge man can, by these slight rearrangements of matter, harness natural forces and compel them to serve his purpose.

As stated above, it is quite as important that things be preserved and held from one time to another as that they be moved from one place to another. Crops must be preserved from the harvest season until other parts of the year; seed must be saved for next year's planting; tools must be made long in advance of their actual use, and the process of making tools is sometimes a long-drawn-out process, involving the mining and smelting of

ores, the cutting of timber, and many other processes. In fact, modern industry consists quite as much in changing the time relations of things as in changing their space relations. Work done at different times must be coördinated and fitted together; products produced at different times, as well as at different places, must be brought together in one time as well as in one place. The failure to appreciate the full importance of time as a factor in economic adjustment is responsible for a great deal of faulty reasoning and many false conclusions.

Discriminating between friends and enemies. The general purpose of all this work of changing the space and time relations of things is to increase the objects of desire and decrease the objects of repugnance in those times and places where we choose to live. The process of increasing the objects of desire is called production, and that of decreasing the objects of repugnance is called destruction. Frequently these two processes are so closely related as to make them difficult to separate. In order to increase the number of desirable plants we must destroy their rivals, the weeds, as well as the pests which feed upon them. Out of the various forms of animal and plant life which would live in our neighborhood we choose the more desirable and make it easy for them to live and multiply, and make it hard for the less desirable to survive.

Man merely holds the balance of power and uses his limited physical strength and his superior intellect in giving the advantage to his friends in the subhuman world and in placing his enemies at a disadvantage. In the field of mechanics, likewise, by moving a vast number of pieces of matter, thereby bringing natural forces into play, he assembles powerful engines. Then, as in the case of a locomotive engineer, by a very moderate pressure he moves a lever which in turn sets powerful forces to work serving his purpose. Other engines equally powerful and controlled with equal ease set powerful forces to work destroying his enemies, both human and subhuman.

One of the labors of Hercules, it will be remembered, was to clean the Augean stables. According to the legend three thou-

sand oxen had been stabled there for thirty years and the stalls had never been cleaned. Being required to clean these stables in one day, Hercules turned the rivers Alpheus and Peneus through them and thus accomplished what his monstrous strength would not have enabled him to do directly. Very commonplace men accomplish greater engineering feats than that nowadays.

What hath man wrought! Writers who have wished to impress their readers with the vastness of some political or social revolution have frequently adopted the device of picturing someone as falling, just before the revolution, into a Rip Van Winkle sleep and awaking just after the revolution into a new world. His perplexity in trying to understand his new surroundings is not only amusing but usually very instructive. We need not adopt the device of whisking someone through an interval of time in order to impress him with the change which man has wrought in his material surroundings. It is only necessary to imagine a philosophical savage transported over a few hundred miles of space and set down in a modern industrial center. Let us imagine him on a busy corner of some great city, where pavements, street-car tracks, curbstones, and sidewalks have replaced the native turf; where, instead of trees, tall buildings of steel and concrete rise hundreds of feet into the air, and the narrow strip of blue between is obscured by elevated railroads, trolley wires, poles, and other obstacles; while the ground underneath is honeycombed with cellars and subcellars, subways and sub-subways, and a network of sewers, conduits, and other subterranean passages. In trying to picture to ourselves the surprise and perplexity of our philosophical savage we may arrive at some conception of the magnitude of the change which man has wrought in his natural environment.

Man, nature, and tools. The two original factors in this work are man and nature,—nature presenting the material to be worked upon and also certain powerful forces to aid man in his work, and man furnishing the knowledge, the ingenuity, the foresight, the patience, and also a certain amount of muscular

or physical power to work upon the material which nature furnishes. Both the raw material and the natural forces, in their elemental state, are commonly included under the name "land." Not only the soil fertility and the minerals but also the sunlight and sun heat, the rain and the atmosphere, are commonly regarded as the appurtenances of land. The most important quality of land is that of extension. Whoever controls a portion of the earth's surface gets the benefit thereby of the air which lies above it, also of a certain fraction of the sun's rays and a certain portion of the rainfall, together with the soil and the subsoil immediately below the surface and the moisture beneath. Under some systems of law he owns also the minerals which are found anywhere beneath the surface. In fact, ownership of land, under these systems, extends from the center of the earth to the uttermost heights above the surface. However, we are not, at this point in our discussion, so much interested in what is included in the ownership of land as in what is included under land as a factor in production. It may be said to include all the materials furnished by nature for man to work upon.

While man and nature are the original and primary factors in the problem a very little study will show anyone that man would not accomplish very much if he relied solely upon his own strength and did not make use of tools to add to the power and effectiveness of his efforts. He can strike a harder blow with a stone held in the hand than with the hand alone, making use of the hardness of the stone and the momentum which goes with its weight. When he fits a handle to the stone he can strike a still harder blow. When the stone is provided with a cutting edge it becomes still more effective for certain purposes. By making use of such simple mechanical devices as the lever and the inclined plane he can move bodies far too large for the meager strength of his unaided muscles. It is a long road but a fairly direct one from these simple beginnings to the mighty engines and complicated machines of the present day. So important have tools become in the economy of a modern nation

that they are generally treated as a third factor of production, along with man and nature. While man and nature are the original and primary factors, and tools the derived and secondary factors, the latter have become in spite of that fact almost as important as either of the original factors.

Labor. In economic discussions the human factor is usually named labor, but it must be remembered that labor includes the work of the mind as well as of the body. As a matter of fact, "labor" was originally used in a much narrower sense. Management, or direction, was assumed to be the real thing, and discussions of the problems of production assumed the manager's point of view. What were his problems? First, of course, was the problem of supplying himself with the three factors of production,—labor, land, and capital, or tools. Since tools were purchasable, a supply of purchasing power was all that was necessary in order to get tools. Hence purchasing power came to be regarded as equivalent to capital. With a supply of these three factors—labor, land, and capital—the manager was prepared to begin the work of organizing a productive enterprise. He needed good labor as well as good land and good tools. An adequate supply of labor, land, and capital of good quality has generally been regarded, therefore, as the necessary condition in national prosperity. But it is quite as important, if not more important, that there be capable management. From the laborer's point of view, what he wants is more and better managers to hire and direct him, to bid against one another for his labor, —not more and better laborers to compete with him. This point of view is quite as important as that of the manager, who does not feel the need of more and better managers to compete with him, but rather of more and better laborers to work under his direction.

There is, however, a certain historical justification for the older point of view, which regards labor as a factor of production to be used and directed by the manager, very much as he would use other factors of production. A skilled mechanic, working in a small shop, or an artist in his studio might employ

helpers to do the rough work which did not require much skill. In such a case we should still regard the thing produced as the product of the mechanic or the artist rather than of his helpers. In a larger enterprise, such as building a house, the man who undertakes to assemble the materials and put them together according to plans and specifications is in a peculiar sense the builder of the house. Even though he may never handle a brick, a stone, or a piece of timber, the workmen are still, in a sense, his helpers and not the real builders. As we proceed, however, from these simple cases to more and more highly complex cases the employer's function becomes more and more highly specialized until it is easy to lose sight of him altogether and to begin to think of the workmen as the real producers instead of mere helpers, and of the employer as a mere profit taker instead of the real producer. Even where the employer does little except to "get business," he is obviously a most important factor in any productive enterprise, and sometimes he seems to be the indispensable factor,—the man who could not be spared. Where he is the life of the enterprise, and any other man could be spared without great harm, he will probably continue to regard himself as the real producer and the others as his helpers. Under such conditions he will probably continue to think and speak of the desirability (to him) of having an abundant supply of labor, rather than of having a large number of "business getters" to compete with him.

There are several reasons why it might be better to continue using the terms "man," "nature," and "tools," as we have done thus far in this chapter, rather than "labor," "land," and "capital"; but on the whole it is probably wiser to follow the custom of writers on economics and use the latter set of terms. In doing so, however, it must be understood that labor includes all effort put forth by men, whether that effort be physical or mental or a combination of both; that land includes everything which nature, outside of man, provides, even though it be above or below the surface of the earth; and that capital includes all joint products of man and nature which are used not for direct

consumption by their owners but for the purpose of aiding the latter in getting other goods which they may consume or enjoy.

Other helps to national prosperity. National prosperity depends, to be sure, upon many other things, such as organization, a good system of laws which encourage rather than discourage production, a body of sound and wholesome tradition, and a system of morals under which all vigorous and constructive habits are called virtues and are therefore approved and encouraged, and all soft and enervating habits of self-indulgence are called vices and are therefore disapproved and discouraged. It is also important that there be a virile religion which shall lend an emotional support to this vigorous type of morality,—which shall, in short, create an emotional interest in an austere and productive life. However, these three factors,—labor, land, and capital,—as we have defined them, are the elementary factors. They are the raw materials out of which national prosperity is built.

Since labor means the human factor in production, it really includes not merely the wageworkers but all kinds and classes of human beings who have any part in production. It is, of course, just as important that there be strong, capable, and well-trained men as that there be productive and well-tilled land and good tools, machinery, and other equipment. It is not enough that the people be capable merely in a general way; it is necessary also that they be trained in many specialized forms of skill. These specialized forms of skill must naturally be the kinds that are needed. One might develop remarkable facility in the performance of a certain feat; but if no one needs to have it performed, it is of no advantage either to the performer or the community.

This means that it is necessary to increase the quantity of those special forms of ability which seem to be in demand,—that there be more men who can do certain important things which relatively few are now capable of doing. In our complex civilization it is not likely that any one individual or one kind of skill can produce the whole of any article. It usually

takes several men, each one doing a special kind of work requiring a special kind of skill, to produce anything. If one special kind of skill is lacking the other workers may be helpless. Not many years ago a glass manufacturer was planning a new branch of his business, in which a new product was to be produced and several hundred men were to be employed. Brick and mortar and all building materials, as well as tools and machines, could easily be procured. All the labor necessary for the running of the plant was available except one special and highly scientific expert. He could not be found in the country. As a consequence the new branch of the business could not be started, the new product was not produced, and employment was withheld from several hundred men. It was obviously very important for that community and for those laborers that they should have a larger supply of that special scientific and technical ability. One man trained for that kind of work might easily have been worth as much to the country as a hundred additional men trained for a kind of work for which there were thousands of others already trained.

A highly efficient system of education should have anticipated the need for these experts and should have trained them. Given a race of high average natural ability, the problem of supplying these highly specialized experts is mainly a matter of education. The probability that among a hundred millions of people of high ability a few could be found with the capacity for the special training needed is so great as to amount to a certainty, but it is the task of the educational system to discover these persons and then to give them the necessary training. The nation with such an educational system as this, together with a population of high natural ability, is not likely to be beaten in economic competition. By far the most valuable resource of a nation is its fund of human energy, which means its people. If this resource is rich to begin with, and if it is thoroughly developed by a sound and efficient educational system, the nation has the first and most important essential of greatness. Nations have grown rich and powerful in the midst

of rather poor natural conditions, by reason of the fact that they have developed their human resources. Other nations have grown poor and weak in the midst of rich natural surroundings by reason of the fact that they have wasted or failed to develop the productive capabilities of their people.

Land. Rich natural resources are, however, very important; that is to say, a nation which develops its human resources properly can prosper more if it possesses a rich territory than if it possesses a poor territory. That is so obvious as to need very little discussion. It is very much like saying that though a good farmer may manage to prosper on rather poor land, nevertheless he would prosper more on good land. This brings us to the consideration of the other original and primary factor of production, namely, land. The productive power of land is not simply a matter of acres, any more than the productive power of labor is a matter of numbers. Quality is as important as area, though area is very important. Area is important in agriculture because it takes area to catch the sun's rays and the rainfall, without which plants cannot grow. It also requires area to give standing room to plants. But with all these advantages which go with area, if there be no soil or no plant food in the soil there can be no production.

The productive power of the soil itself depends partly upon its physical and partly upon its chemical condition. A good physical condition depends upon freedom from stones and other obstructions which interfere with tillage and the use of machines, a good subsoil which permits excess water to percolate downward in time of heavy rainfall and then to rise to the surface in times of drought, sufficient porosity to permit the roots of plants to penetrate easily, sufficient firmness to lend support to the plants, and so on. A good chemical condition depends, first, upon the absence of injurious acids and alkalis in dangerous quantities and, second, upon the presence of the elements of plant food in sufficient quantities and in proper proportions. Plants, like animals and human beings, need a balanced ration. There are many of these food elements, but those which are

most likely to be absent or insufficient are nitrogen, phosphorus, and potassium. Generally speaking, any soil which possesses these three elements in the proper proportion may be said to be good soil, so far as plant food is concerned. The other necessary elements are so universally abundant as to furnish the average farmer no occasion for worry or even forethought. Only the limiting factors of production are considered to be of any economic importance. Hence only those which are likely to be scarce and to limit production are called economic factors.

Mineral lands. Mineral lands differ so fundamentally from farm lands as to be almost in a class by themselves. While farm land is so widely distributed as to give almost every section of the earth's surface some opportunity for a profitable agriculture, and while no section can become fabulously rich in farm products, minerals are so localized as to leave large areas of habitable territory with practically no mineral resources whatever, while very small districts are sometimes so rich as scarcely to furnish building space for the dwellings of the people who live by working the mines. Coal and iron are not only the most valuable, in the aggregate, of all the minerals but they have done more to give the peculiar character to our present industrial civilization than have any other two factors. This is sometimes called the Age of Steel; but without coal to furnish a cheap and abundant fuel and without the rich beds of iron ore, some of which can be worked with a steam shovel, steel could not have become so abundant and such a dominant factor in this industrial age.

Capital. Capital takes on such a multiplicity of forms as to make it impossible to describe it beyond saying that it is made up of all goods, except land, which are used to get an income. They are distinguished from things which are used directly for personal gratification. Thus, all tools and machinery, stores, factories, shops, barns, fences, and raw materials not yet worked up into consumable form are capital. Dwelling houses occupied by their owners, food in the larders of consumers, clothes which are in the closets as well as those

actually being worn, books, pictures, household furniture, etc. are consumers' goods. The dividing line between producers' goods and consumers' goods is sometimes a rather dim and wavering one, but that need not disturb us much. The same may be said regarding the line which separates the animal from the vegetable kingdom, and yet we are never puzzled as to which of the two kingdoms may claim any one of our common plants or animals. The physician's automobile may be at one time a tool of his profession and therefore capital, and at another time a pleasure vehicle and therefore a consumer's good. Many other objects may be so close to the dividing line as to puzzle us at times, but the great mass of the objects with which we are concerned is easily classified.

Capital, like consumers' goods, comes into existence through the application of labor, ingenuity, and forethought to natural objects. But there is one thing which enters into the production of a piece of capital which does not enter to the same degree into the production of a consumer's good; that is, waiting, or abstinence. If you labor to make a tool for your own use you do not reap the reward of your labor until the tool has been completed and has been used for a time in adding to your production. You have postponed your consumption. If you sell the tool to someone else you may at once spend the money you receive for it and avoid waiting. But the one who bought it of you now has to wait, since he has given up the opportunity to spend the money for consumers' goods and must now abstain until the tool begins to bring him in an income.

When production exceeds consumption capital is increased. From the foregoing it will appear that the accumulation of capital depends in a very direct manner upon the character of the people. Unless the nation consumes less than it produces, it is impossible that capital should increase at all. Even if accumulation should take the form of saving money, it would still be necessary for all the people to live on the consumers' goods produced by a part of them, in order that the rest of them might devote their time to the making of tools

and other producers' goods. That would be necessary even in a communistic society. In our present economic system any individual who can live on less than his income may spend the balance of it on tools and other producers' goods. That which he spends for consumers' goods virtually hires men to produce that class of goods, while that which he spends for producers' goods virtually hires men to produce that class of goods. The more money there is spent for producers' goods, the more rapidly they will accumulate. This means that the more thrifty the people are, and the more inclined they are to live on less than their incomes and to spend the remainder for tools, the better equipped with tools they will be.

We now see how definitely the prosperity, power, and greatness of a nation depend upon the three factors—labor, land, and capital. A nation whose people are possessed of high ability (especially for those fields of work where ability is most needed), which has an abundance of rich land, and which accumulates capital rapidly so as to supply itself with the best of tools and other equipment has all that is needed on the physical side to make it prosperous. But much remains to be said in detail about each of these factors and the ways in which they are to be combined.

CHAPTER X

ECONOMIZING LABOR

By the Division of Labor

As suggested in Chapter IX, labor, land, and capital are the elements out of which national prosperity is built. Of these by far the most important, in the aggregate, is labor, since we include under that term both mental and physical exertion, the labor of management, of direction, and of investment as well as manual skill and muscular strength. It was also stated that the efficiency of labor depends upon two factors: the natural ability of the people and their training. But there are many things involved in training which are not taught in schools or learned in shops or business houses. The general attitude of mind of the whole people, their outlook on life, their personal habits, their systems of morals, and even their religion, all have their share in the efficiency of the people. The efficiency of labor depends also, to a large degree, upon its organization and the opportunity for specialization.

Adam Smith begins his great "Inquiry into the Nature and Causes of the Wealth of Nations" with a discussion of the division of labor. Other writers, both ancient and modern, had commented on the great fact of interdependence of individuals in society, but no one had gone into such detail or shown so clearly just why a minute division of labor was so advantageous. His statement of the case has scarcely been improved upon up to the present day, though many of his illustrations are out of date.

Meaning of the division of labor. By a division of labor he means, first, a system under which no one produces everything he needs, but each one confines himself to the production of

that one thing or those few things for the production of which he is best fitted, exchanging his surplus product for the surplus products of others who are specializing on other things; second, the process of dividing the work involved in the making of a given article (each man performing a single part) and then assembling all the parts, thus producing a complete whole. He mentions the nail-makers of his day as illustrations of the first form. A common blacksmith, having many other kinds of work to do, could never become very skillful at nail-making, but one who did nothing else except to make nails became very skillful and could make in the course of a day several times as many as a common blacksmith. He mentions boys under twenty who had never learned any other trade and who could make, each of them, upwards of two thousand three hundred nails in a day; whereas a common smith, even though he were accustomed to making nails occasionally, could seldom make over eight hundred or a thousand in a day. The second form of the division of labor was found in his day in the making of pins. The work of making a pin was divided into eighteen different operations, each operation being performed by a different workman. Of course neither nails nor pins are made nowadays as they were in his day, but the division of labor has been carried even farther. They are turned out by automatic machines, but the machines are made by one set of men, and the metal is mined, smelted, and prepared by different groups; all are performing parts of the work of making nails or pins, as the case may be. Thousands of other illustrations may be found all about us if we choose to look for them.

Advantages. Adam Smith names three distinct advantages which result from the division of labor:

> First, the improvement in the dexterity of the workman necessarily increases the quality of the work he can perform; and the division of labor, by reducing every man's business to some one simple operation, and by making this operation the sole employment of his life, necessarily increases very much the dexterity of the workman. . . . Secondly, the advantage which is gained by saving

the time commonly lost in passing from one sort of work to another, is much greater than we should at first view be apt to imagine it. It is impossible to pass very quickly from one kind of work to another that is carried on in a different place and with quite different tools. . . . Thirdly and lastly, everybody must be sensible how much labor is facilitated and abridged by the application of proper machinery. It is unnecessary to give any example. I shall only observe, therefore, that the invention of all those machines by which labor is so much facilitated and abridged, seems to have been originally owing to the division of labor. Men are much more likely to discover easier and readier methods of attaining any object, when the whole attention of their minds is directed towards that single object, than when it is dissipated among a great variety of things. But, in consequence of the division of labor, the whole of every man's attention comes naturally to be directed towards some one very simple object. It is naturally to be expected, therefore, that some one or other of those who are employed in each particular branch of labor should soon find out easier and readier methods of performing their own particular work, wherever the nature of it admits of such improvement. A great part of the machines made use of in those manufactures in which labor is most subdivided, were originally the inventions of common workmen.[1]

Adam Smith's opinion that the third and last of these advantages was of special importance has been fully justified by subsequent experience. Those special phases of the division of labor which he so aptly illustrated by the nail-makers and the pin-makers of his day scarcely exist now except in some minor industries. The nail-makers and pin-makers actually made their products with their own hands, using only such tools as could be handled and driven by their own muscles. Machines have now taken the place of the simple tools of that day. Sometimes these machines are directed and fed by attendant laborers, but sometimes they are so perfected as to require very little attention, feeding themselves automatically and stopping automatically when anything goes wrong. In these cases the work of the attendant is reduced to a minimum, consisting

[1] Wealth of Nations, chap. i.

merely in starting the machines and putting them in order when anything goes wrong.

There are penalties, however, to be paid for the extreme division of labor to which we have become accustomed. It is undoubtedly efficient and economical—without it many articles which are now enjoyed by great masses of people would be so scarce as to be available only for the very few—but it puts a great strain upon those who specialize. The ability to give close attention to one thing for a long time is not very widely distributed. Only the superior races possess it; and even within these races there are many individuals who lack it, especially in their early youth. They easily become discontented and restless if required to work under conditions of extreme specialization. They would be much better satisfied with more desultory work, even though such work accomplished less. This is one of the reasons why the quality of the population is such an important factor in national prosperity. A nation whose workers cannot stand specialized work will easily be left behind by a superior nation whose workers can.

Differences between a tool and a machine. The difference between a tool and a machine is fairly clear. The working part of a tool is not only driven but guided by human muscles. A machine may be driven by human muscles, but the working part is guided by the machine itself. Besides, the power is not applied directly to the working parts, but indirectly through a series of mechanical devices such as wheels, pulleys, levers, cranks, etc. For example, the working parts of a sewing machine are the needle and the bobbin. These are guided by the other parts of the machine, and the power is applied indirectly. It is, therefore, a machine, even though it is propelled by the muscles of the operator; on the other hand, the needle of the tailor or seamstress is not only propelled but guided by the worker. The hammer of the blacksmith is a tool; a steam hammer is a machine, not so much because it is driven by steam as because the working part (that is, the hammer itself) is controlled, guided, and made to strike accurately by other parts

of the machine, and the power is applied indirectly through mechanical devices. Even in the case of a riveting machine, while it has to be held in place, the actual blows are struck in rapid succession by a striking part which repeats the same motion over and over, being guided in its rapid motion by other parts which are made for that purpose.

Advantages of machinery. The advantages of the machine over the tool are, first, that it makes possible the use of greater power than can be used to drive a tool; second, that it can be driven at much greater speed. Since the working part is guided accurately by the mechanism and made to repeat the same operations over and over, the only limit of the speed at which it can be driven is that fixed by the strength of the materials of which it is composed. A third advantage is that by reason of the power which may be used to drive it, and of the strength of the materials of which it is composed, it can perform operations which no tool whose working part is guided and controlled by human muscles could perform. Perhaps it would be more accurate to say that it can be made to control working parts which are themselves too large and heavy to be guided by human muscles. The working part of a steel-rolling mill, for example, consists of the rollers. Obviously no human hand could guide such powerful instruments, to say nothing about driving them. They are held in place and controlled by a powerful framework and, with the stupendous power which they have behind them, can perform gigantic feats. The fact that a machine is capable only of repeating one operation over and over suggests a weakness. It can be successfully employed only where there are operations which have to be repeated a great many times. The fact that sewing involves the making of many stitches, all of them very much alike, makes it a suitable kind of work for a machine. The binding of sheaves of grain is another operation which has to be repeated a vast number of times in the harvesting of a crop; therefore a twine binder is a practical machine. Threshing the grain with a flail also required a constant repetition of the same act; therefore it could be per-

formed by a machine. In short, any operation which has to be repeated without variation a great number of times is suitable for machine work.

Human ingenuity is now able to construct machines which can perform any operation, however delicate, which the human hand can perform. Anyone who has seen the wonderful machinery at work in a modern watch factory, for example, will not doubt this statement. But if it is an operation which does not have to be repeated continuously and a great number of times, it may not pay to build a machine for the purpose. It may be cheaper to do the work by hand. Even the darning of socks and the patching of trousers can be done by machinery; but unless it were done on such a large scale as to keep a darning-machine or a patching-machine busy a good part of the time it would be cheaper to darn and patch by hand. There are still a good many operations of this character, especially in the household and also in agriculture, the greatest of all our industries. Much work must still be done by hand or with tools rather than with machines.

Avoid competing with machines. By way of digression it may be pointed out that young people who are looking forward to an occupation should bear in mind that a machine can do anything which can be reduced to a routine, or a constant repetition of the same act, and that in the course of time all such work will probably be done by machines; therefore any occupation requiring constant repetition ought to be avoided by everyone who is intelligent enough to be trained for anything else. No machine can think or use discretion; therefore it will never be able to do any kind of mental work or any kind of physical work which requires judgment, discretion, taste, or tact. Those who do not wish to compete with machines will do well to train themselves to think, to use discretion, or to exercise taste or tact. One should do this as much in the interest of the nation as in the interest of oneself. The nation has no great need for men to do work which machines can do just as well. What it needs is men who can do what machines can never do.

Two kinds of division of labor. As suggested above, the division of labor takes on a somewhat different character when highly developed machinery comes into general use. This may be explained further by pointing out two kinds of division. One has been called the contemporaneous division of labor and the other, the successive division of labor.[1] Under the contemporaneous division of labor men are, at the same time, specializing in different lines of production. One group is producing, let us say, breadstuffs and bread, another meat, another textile fabrics and clothes, and so on, each group bringing some kind of raw material through the various stages of production until it matures into a finished product ready for consumption. Another phase of the contemporaneous division is found when different men are, at the same time, producing different parts of the same product, the parts being assembled later into a finished whole. Lumbermen are cutting the timber which eventually goes into a house, while men in the ore beds are getting out the iron ore which eventually goes into the house in the form of nails, and still other workmen are making the brick or quarrying the stone which eventually will go into the foundations and the chimneys.

Under the successive division of labor different sets of men are working on the same material, bringing it forward through the successive stages to maturity. Thus, following the choppers who fell the trees come the sawyers who saw them into rough boards, the carriers who transport the boards, the men in the planing mill who plane them, and so on, until the carpenters fit them into their places in the house. The iron ore goes through similar stages, as does every bit of material which enters into the final product.

The lengthening of the process. This lengthening of the process of production, making it extend over a longer period of time, is one of the most striking characteristics of the era of machine production. It calls for more foresight, more planning for the distant future, more expenditure of labor and in-

[1] See Taussig, Wages and Capital, p. 6. New York, 1898.

vesting of capital long in advance of the consumption of goods, than were ever necessary or possible in any previous age. There is, therefore, under this régime, a greater demand than ever before for foresight, for thrift, for courageous investment, for the hazarding of large sums on the chance of gains in the distant future. There may be some connection between this fact and the fact that the large rewards, in our day, go to the men who exercise foresight, who invest courageously and wisely, who hazard their time and wealth on enterprises which can bear fruit only at some distant day in the future; but to do these things successfully and safely requires great wisdom. Some, however, lacking wisdom, may blunder into success; but those who blunder are much more likely to blunder into failure.

The contemporaneous division of labor has to do with space; that is, it involves the doing of different kinds of work in different places at the same time. This calls for the coördination of that labor and the exchange of products in order that each specialist or specialized group may get the advantage not only of its own efficiency but of that of other specialists and specialized groups. Where different workers are, at the same time, but in different places, working on different parts of the same product, it is necessary that someone should coördinate the work. In a great automobile factory, for example, there are many different parts being produced simultaneously. In order that these parts may all be assembled and fitted together there must be very careful planning and organization. This is what is meant by the coördination of labor performed in different places.

The time element. The successive division of labor has to do with time; that is, it involves doing, at different times, by different men, different parts of the work of completing an article. In the same automobile factory the same piece of material is worked upon by many men in a regular order of succession. This calls for the coördination of labor performed at different times. The lengthening of the process of production in the whole of modern society makes this form of coördination

peculiarly important. Its greatest importance, however, is found outside any individual factory. Before the automobile factory could be built there must have been much work done in procuring the raw materials for the building and the machines, in producing food and clothing for laborers, and in doing a multitude of other things. Similarly, before shoes can be made, cattle must be raised and slaughtered, and their hides tanned; shoe factories must be erected and equipped with products from the mines and forests; and a vast amount of preparation must be made in other ways. The labor of the herdsman must be coördinated with that of the clerk in the shoe store; otherwise we should not have shoes as we now have them. Unless this coördination is brought about, the same man would have to kill the animal, skin it, tan the hide, and go through all the processes necessary to the finishing of a pair of shoes.

Territorial division of labor. In one of its broader aspects the contemporaneous division of labor is known as the territorial division of labor. This is what takes place when one region produces that for which it is best fitted and exchanges its surplus for the surplus of other regions which also are specializing on those products for which they are best fitted. Thus, our Middle-Western states of the upper Mississippi Valley produce hay, grain, and live stock to supply bread, meat, and dairy products not only for themselves but for the rest of the country as well, besides sending a great deal abroad. The South grows cotton enough to supply the greater part of the world. Both regions receive in exchange for these farm products the manufactured products of the Eastern states and foreign countries, and the mineral products of the mountain states and the upper regions of the Great Lakes.

It is the territorial division of labor which gives rise to the important business of transporting goods from one region to another. Obviously, if one region should find it advantageous to produce everything needed or desired by its inhabitants, there would be no occasion for transporting goods into it. Similarly,

if it did not produce a surplus of something or other which could be sold on an outside market, there would be no occasion for transporting goods outward. At the same time, the territorial division of labor is made possible by the transportation of goods and tends to grow in importance in proportion as transportation becomes cheaper and more efficient. A slight advantage in the exchange of products might easily be overcome by a heavy transportation cost. For example, even though New England cannot grow wheat so economically as Kansas or North Dakota can, yet if the cost of transporting it over the intervening distance and of transporting manufactured products back to pay for it were very high, New England might find it advantageous to grow her own wheat, and the states which now produce it might find it advantageous to do their own manufacturing.

The advantages of a territorial division of labor, where the transportation problem is solved, are similar to those which result from a division of labor among individuals in the same neighborhood. If it is profitable for each individual to specialize upon the work for which he is best fitted, it is equally profitable for each neighborhood to specialize. In almost any neighborhood, however, there is some diversity of soil and natural resources, as well as a diversity of talents among the people. Therefore it will seldom happen that a whole neighborhood, much less a whole region of considerable size, can profitably specialize upon a single product. It is more likely that a whole neighborhood or region will find it profitable to specialize upon a number of products. Thus, New England, the South, and the Corn Belt each produces a considerable variety of products, but each also finds it advantageous to import a considerable variety of other products. New England, for example, probably secures her bread and meat at less cost to herself by devoting most of her energy to manufacturing, and then exchanging her manufactured products for the wheat and beef of the West, than she would if she tried to grow these important food products on her own soil. Let us suppose that the labor of an average man

will produce in a year eight hundred dollars' worth of goods in an average New England factory, but only six hundred dollars' worth of wheat on an average New England farm. Let us assume that it costs twenty-five dollars to ship his goods west and seventy-five dollars to ship the wheat east. Let us assume, further, that in the wheat-growing sections of the West the labor of an average man will produce a thousand dollars' worth of wheat and only eight hundred dollars' worth of goods in a factory. It can easily be figured, so long as the conditions remain as we have assumed them to be, that the wheat section can get more manufactured products for its labor by growing wheat than by manufacturing, and that New England can get more wheat for her labor by manufacturing than by growing wheat.

International division of labor. When the territories considered are not different sections of the same country but different countries, we have what is known as the international division of labor. Were it not for certain uneconomic factors which enter into the problems of national life and existence, everything which can be said in favor of a territorial division of labor and freedom of exchange within a country could also be said, and with equal force, in favor of an international division of labor. The chief of these uneconomic factors is the possibility of war. War is the greatest disturber of normal economic activities, and until it can be eliminated every nation must calculate with reference to its possibility and be prepared for it. In case of war a nation which is not prepared to produce all the necessaries of life, as well as all military supplies, may find itself helpless before a foreign enemy. Its only other hope would be to keep open the channels of commerce which connect it with outside sources of supply, but this is one of the things which the enemy country would try to prevent. Nitrates, for example, are, in the present state of science, necessary both for fertilizers and for explosives. A country which could neither produce its own nitrates nor manage to get a supply from abroad could not wage war for a very long time.

In some animal societies, and especially in the colonies of certain insects such as bees and ants, there is an elaborate and admirable division of labor. Elaborate and admirable as it is, however, it is rudimentary as compared with that which is found in any highly developed industrial society. There are no such minute division of labor and extreme specialization as are found in a modern factory; there is no such detailed planning for the distant future; there is no such bringing together of materials from distant places; there is no such coördination of labor performed at such widely separated times and places; there is no such system of exchange as we see carried on all about us in our own communities. If you will study the various material objects on your dinner table and find out all about each of them, you will find that literally thousands of people, few of whom you ever saw or heard of, and few of whom ever saw or heard of one another, have had a part in the preparation of your meal and the table, dishes, knives, forks, and spoons which you use. It is through the system which we have called the division of labor that you, by doing a very few useful things and doing them well, find a considerable variety of objects on your table at the proper time without your having given much thought to any one of them.

No preconceived plan. This is sometimes called the organization of industry. The term "organization" may be a little misleading, though not necessarily so. It seems to imply that somebody thought it all out or planned it and then organized the system. It did not come about in that way. The process was more like the slow growth of an organism. Each individual looked about for something to do in order to earn a living and took what looked to him at the time like the most available opportunity. Wherever there was a scarcity of workers there was an opportunity for a new worker. Wherever there was an oversupply the opportunity did not look so good. By that simple process in which each individual chose to do that which he could do to his own greatest advantage the whole elaborate system was worked out.

Adam Smith's remarks, quoted earlier in this chapter, regarding the way in which the minute division of labor has aided in the invention and improvement of machinery, may be applied to the much greater problem of the development and improvement of a great and complex industrial system. When each workman spends all his time performing a single operation, it is much easier for him to devise a better way of doing it than it would be if he had to give his attention to many things. It is probable that no important and complicated machine was ever invented and made to work successfully without a great deal of trying out, modification, and general improvement. In actual use many weaknesses in the machine are revealed which no inventor, however wise, could have foreseen and prevented. What is sometimes called the heroic theory of invention does not actually work in practice. By the heroic theory is meant the theory that a great invention springs, a completed whole, from the mind of the inventor, as Athena sprang full-armed from the head of Zeus. The fact seem to be that no human mind is capable of inventing a complete and successful machine without many trials, failures, modifications, and detailed and piecemeal improvements. Even such a simple device as a bicycle passed through a long and interesting evolution before it reached a stage which made it generally useful and popular. The automobile is another illustration of gradual and detailed improvement after it was actually in use.

If it is impossible for any human intelligence to invent and construct at once a satisfactory automobile, it would have been obviously impossible to invent and organize a whole industrial system; that would present an infinitely more difficult problem than the invention and construction of any machine that was ever built. It has been by age-long trial and error, variation and selection, experiment and failure, that even a tolerably successful industrial system has been worked out. There are doubtless endless improvements yet to be made, but they certainly will be made by the same process of gradual and piecemeal adjustment. Anyone who thinks that he can devise

and organize a better system than the present shows, by the very fact that he thinks so, that he is unfitted for the task. He shows that he lacks the first element in fitness; namely, a knowledge of the vastness of the problem and the infinite number of difficulties to be overcome. It is different, however, with one who thinks of some detail in the present industrial system which might be improved. This presents a problem worthy of the greatest minds, and it also furnishes a possibility of genuine achievement.

CHAPTER XI

ECONOMIZING LABOR (CONTINUED)

BY THE USE OF POWER

Power needed for moving material objects. It has been pointed out in Chapter IX that man's work, on the physical side at least, consists in moving material objects. For this work the first essential is power. The power first applied was, of course, that which was generated in his own body and exercised through his own muscles. But the secret of the industrial success of modern civilized nations lies in their command of other sources of power rather than in any superior muscularity of their own.

Animal power. The first of these other sources of power which man utilized on a large scale was that of animals which he domesticated and enslaved. They are still one of the most important sources, if not the most important source, of power. There were on the farms of the United States in 1920 about 26,000,000 horses and mules, to say nothing of those in use in the cities and towns. If we add those not on farms it brings the number nearly to 30,000,000. It is not easy to compare the actual working power of a horse with that of the horse-power unit as used in measuring the power of a steam engine; but, assuming that they are equal, it would appear that the total animal power in use in the United States was, until recently, very nearly as great as the total steam and water power used in manufacturing.

Among the animals which have furnished power for man's work may be named the horse, the mule, the ass, the ox, the buffalo, the camel, the elephant, the reindeer, the llama, the dog, and the goat. Of these the most important for the north-temperate zone is the horse, though the ox is a close second.

Originally, in fact until very modern times, the horse was used mainly to carry man himself or loads of material on his back rather than for traction; that is, for pulling or drawing loads. Such traction as he was required to perform was the drawing of war chariots and carriages of state and, later, of carriages and vehicles for the conveyance of travelers. His speed fitted him especially for this work. For the slower and heavier work of plowing, harrowing, and drawing heavy loads of farm produce the ox was long considered superior. In the first place, he was larger and heavier than the horses of that day. His heavy body and short legs and his general anatomy seemed to fit him peculiarly for pulling. He fights by pushing with his head. This seemed to call into play the same muscles, bones, and joints as are used in pushing on the yoke. During the last century or so the horse and the mule have been gradually displacing the ox even in agriculture.

Displacement of the ox by the horse. Two factors have contributed to this change from the ox to the horse and the mule as a source of power for farm work. One is the development of large and heavy breeds of horses of such strength and docility as to fit them as well as oxen for the pulling of heavy loads. The other is the development of farm machinery. All large breeds of horses, however, have been developed in the northwestern parts of Europe; that is, in Great Britain, northern France, Belgium, Holland, and Denmark. Whether this is due to something in the soil or climate or simply to the ability of the people of those countries as animal breeders it is impossible to say. Russia and Hungary also are horse-breeding countries and use horses to a certain extent for traction purposes, but they have not produced such huge draft horses as the other countries mentioned. The United States also is breeding large numbers of heavy draft horses, but we have imported our breeding stock from Great Britain, France, and Belgium. We surpass all other countries, however, in the number, quality, and speed of our trotting horses. The lighter breeds of horses not only lack the weight necessary for drawing heavy loads but

they are also likely to be too nervous and excitable. The United States and Canada, together with the countries which originated the heavy breeds, have pretty generally substituted the horse and the mule for the ox even in farm work.

The mule. Southern Europe and the southern part of the United States have made large use of the mule. This hybrid, combining something of the patience and endurance of the ass with the size and strength of the horse, is admirably adapted to farm work in climates where the huge draft horses of the North suffer from the heat and where the lighter horses of the South are too nervous and excitable for the slow, heavy work on the farm. Even the ass has played a humble though useful rôle by furnishing power to those who could not afford a more expensive animal, such as a horse or a mule.

Both the horse and the mule—even the huge draft breeds—have one great advantage over the ox; that is, their more rapid gait. While they cannot trot as well as the lighter breeds of horses, they can trot very much better than the ox and they can walk much faster; and in farm work it is this faster walk which counts.

The factor which has had a great deal to do with the substitution of the horse and the mule for the ox is the increased use of agricultural machinery. This has required power of a superior kind, and the horse has proved to be much better adapted than the ox to the drawing and handling of machinery. This is mainly because of his more rapid gait. When the farmer has his money invested in expensive machinery it is important that he get as much work out of it as possible. He can scarcely afford to allow it to run so slowly as would be necessary if it were drawn by oxen.

Farm machinery. Still another factor which has contributed to this end is the higher wages for farm labor in the countries of northwestern Europe, Canada, and the United States. If a farmer were hiring labor at a very low wage, it would not be so important that he get the greatest possible amount of work out of his hired man. But when labor is expensive the effect is

very much the same as when tools and machinery are expensive. It is thus important that as much as possible shall be accomplished by each laborer. It is therefore better to give him a fast-walking team than a slow-walking team.

Historical importance of the ox. The ox, however, from the most ancient times until quite recently, has been the chief if not the sole draft animal of all the races that have used draft animals at all. His docility and patience, his great strength, the cheapness of his harness, and his ability to find his own living when not at work contributed to make him a most valuable assistant to man in his struggle for the conquest of the earth. In the pulling of the heavy wooden plows and harrows that were in use before the modern steel tools were invented, and the lumbering carts that were in use before modern vehicles were constructed, he enabled men to cultivate the soil on a vastly more extensive scale than would have been possible by human muscles alone. He thus contributed to the production of food for increasing populations of men, and in the end he contributed his own body to help feed them, and his own hide in order that they might be shod. In many parts of the world he is still the principal draft animal for farm work. In southern Europe, southern Asia, and parts of South America one may still see magnificent teams of oxen at work in the fields and drawing carts along the highways. They move with a steadiness and massiveness which give the impression of irresistible power; but they are too slow for most of our hustling Americans, though a good many oxen are used in the rough lands of New England. If we take the whole history of man's use of power, it is probable that the ox has furnished more in the aggregate than any other agency, not excluding coal and steam.

Tropical animals. The Asiatic elephant and the camel are admirably fitted for tropical and subtropical countries, the former in moist and the latter in dry climates. The African elephant has never been domesticated, either because of his fierce and intractable disposition or because the natives of Africa did not care to domesticate him. It is a remarkable fact

that the native African races never domesticate any animal,—not even the zebra, which appears capable of domestication. However, no other race has reduced any animal to domestication since prehistoric times. Either prehistoric man was our superior in this art or else we have not sufficiently felt the need of any more animals. The prodigious strength and the remarkable intelligence of the elephant fit him for a variety of operations besides pulling loads. He requires considerable quantities of coarse fodder such as grows abundantly in warm and moist countries. The great advantage of the camel in dry countries is, of course, his well-known ability to work for long periods without water. He is used in parts of southwestern Asia and northern Africa. The water buffalo possesses qualities almost the opposite of the camel; that is to say, he can work only where water is abundant and easily accessible not only for drinking but for frequent bathing or wetting of the skin. He is a powerful animal and well adapted to working in muddy lands and irrigated rice fields.

In polar regions, where vegetation is scarce, the problem of animal power is a more difficult one. Where moss and lichens abound, the reindeer is a valuable source of power. In the high mountain regions of Peru the llama is used for carrying loads but not for traction. Where forage is not found in sufficient abundance, but where meat and fish can be provided, some carnivorous animal has to be used. The dog is the only one which is sufficiently well domesticated to serve the purpose.

Solar energy. The great physical source of power, so far as man has been able to develop it, is understood to be the sun. The amount of solar energy which comes to the earth in the form of light and heat is so stupendous as to bewilder the imagination. Its most important service is in the promotion of plant growth and, through plants, of animal growth; but it is also transformed into mechanical power in a number of ways.

In the first place, it vaporizes water. Since the air is heavier than water vapor the latter rises, or, more literally, the air falls through gravitation. When this water vapor reaches high alti-

tudes and is congealed, it becomes heavier than air and falls through gravitation in the form of rain, snow, etc. A small fraction of it falls on mountains and other high portions of the earth's surface. Gravitation still pulls it downward through the streams. These are harnessed and made to turn water wheels, thus furnishing mechanical power to do man's work; that is, to move pieces of matter.

In the second place, through plant growth combustible material is stored up in the bodies of trees and other plants. When this material is burned, heat is developed which may be used to vaporize water. In the form of vapor the water expands and may be made to push a piston, which is, again, a usable form of mechanical power for the moving of other bodies. The accumulation and covering over of vast masses of combustible vegetable material in previous geological periods gave us our coal beds, which have recently become a principal source of both artificial heat and mechanical power. It is generally supposed that petroleum is of animal origin. If so, it is, like coal, the product of solar energy. It may be used, like coal, to transform water into steam. The internal-combustion engine is a later development and is, in many ways, a superior method of transforming combustion into mechanical power.

In the third place, the direct rays of the sun may be so concentrated as to produce an intense heat, which may, in turn, be used to transform water into steam. According to tradition the great mathematician Archimedes burned the Roman ships, which were besieging his native city of Syracuse, by the use of a large number of mirrors. By reflecting the sun's rays from all these mirrors upon a single spot, so much heat was concentrated as to set the ships on fire, one after another. Whether there is any foundation of fact for this story or not, there is no doubt as to the possibility of producing an intense heat by the concentration of the rays of the sun. Anyone can demonstrate this with a common burning-glass. Solar engines have already been constructed which make use of converging mirrors for the concentration of the sun's rays. This produces an

intense heat which, in turn, converts water into steam and moves a piston.

Winds. In the next place, if we may assume that winds are in general caused by variations in temperature they may be said to be derived from solar energy. This mechanical power, as used for the moving of boats, has been of the very greatest importance in the development of commerce and the spread of civilization. The epoch-making voyages of Columbus, as well as the voyages of great numbers of men less noteworthy than he, were made possible by the ingenuity with which man had learned to utilize this vast source of power. For certain kinds of stationary work which does not have to be performed regularly, such as pumping water, grinding grain, etc., the windmill has proved an economical device for utilizing the power of the winds.

Tides. Another source of power of which some use has been made is the tide. This can be traced to the momentum of the earth rather than to solar energy. The rising and the falling of the tides, especially along coasts with many inlets and estuaries, have created opportunities for tide mills, which can be made to do certain kinds of work.

With all these sources of power, and possibly others which may be developed, there is no likelihood that our ingenious race will ever be compelled to fall back upon its own muscles or even to depend exclusively upon animal power. In that distant day when our coal beds and oil fields are exhausted, the sun's rays will still continue to strike the earth. That being the case, trees and other plants will still grow, though wood could scarcely take the place of coal and petroleum. Alcohol can scarcely become as cheap as gasoline has been in the past, but it can be manufactured in considerable quantities from a variety of plants. Again, the rains and the snows will continue to feed our rivers and turn our waterwheels. Electrical transmission will enable us to utilize many streams now running idly to the sea and to distribute the power over wide areas and send it a long distance from the streams. Solar engines may be so perfected as to enable us to utilize the inconceivable and inexhaust-

ible flow of energy which comes to us in the form of direct rays from the sun. The winds will continue to blow and push our sails and turn our windmills. And so long as the earth continues to revolve about its axis, the tides will continue to ebb and flow, and these may furnish us considerable quantities of power.

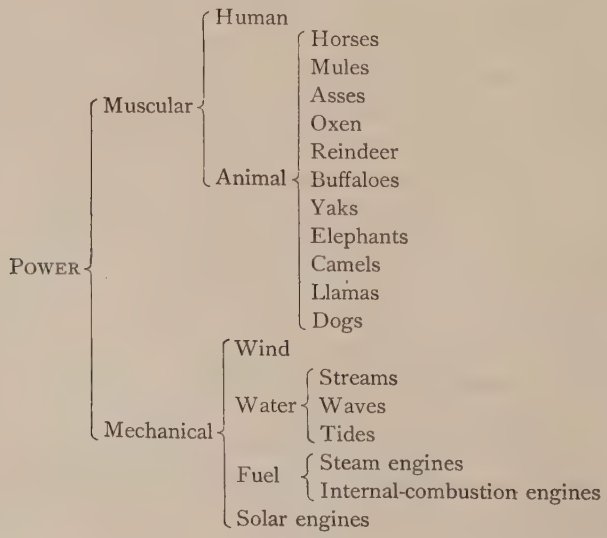
Even if it should happen that none of these sources nor all of them combined should furnish power quite so cheap as that which we now enjoy through the use of coal, still we may become so well to do, through improved agriculture, improved technical processes for utilizing power, and more rational habits of living, as to enable us to bear the extra cost of these other kinds of power with no great inconvenience. Even if this should not happen, it must not be forgotten that a considerable number of civilizations have been built up and multitudes of people have lived comfortably and happily with no power except that of their own muscles, their domestic animals, the winds, and the waterfalls.

The steam engine. Next to the yoking of the ox at some time in the prehistoric past, the most momentous event in the history of man's power was the invention of the steam engine. The reason why this was so momentous was that the coal beds of the north-temperate zone furnish a vast quantity of very cheap and very concentrated fuel. It is difficult to see how the heat of burning coal could have been transformed into mechanical power in any other economical way. The great cheapness and economy of this source of power is what has made it such a powerful factor in the development of modern industry. By merely vaporizing water in a boiler by means of this cheap fuel, enormous pressure can be exerted. This pressure can be made to move a piston. From this point on, further developments are merely the results of mechanical adjustments. Whenever one object, such as a piston, can be made to move as we want it to move, other objects can be hitched to it and be made to move also. The first of these mechanical adjustments to produce great results was that by which the moving piston was made to turn a wheel, thus converting linear motion into circular motion.

After that adjustment was made, every form of steam-driven machinery became a mechanical possibility.

Time does not permit us to mention all even of the really important adjustments which have been made for the greater utilization of the pressure of steam on a movable piston. The economical conversion of mechanical power into electricity and of electricity back into mechanical power has enabled us to utilize power in a variety of ways which formerly were impractical, besides giving rise to an electrical industry of vast proportions. The internal-combustion engine has made possible automobiles and flying machines.

Roads. The subject of roads and tracks would furnish an interesting study to supplement a study of power. The better the track, of course, the less power it requires to move an object. This would include everything from the air and the ocean, railway tracks, paved streets, and dirt roads down to the lubricated grooves, cylinders, and sockets through which the parts of a machine are made to move. Roads, streets, and railway tracks will be discussed under the head of transportation. The rest must be left to the imagination of the student.



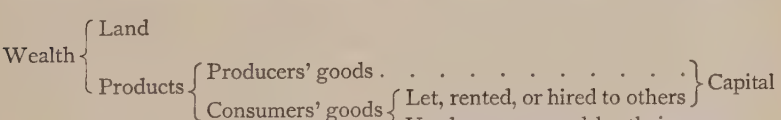
CHAPTER XII

ECONOMIZING LABOR (Concluded)

By the Use of Capital

What is capital? Capital has come to play a very important part in modern industry. This increase in importance has been so great as to lead to the impression that capital has come into existence only in recent times. That which is essentially capital has been in existence as long as tools have been in existence, but it has taken on a new and very distinct importance since the rise of machine production.

As a factor in the modern economic system, capital may be defined as wealth, other than land, which is used by its owner to secure an income rather than for direct enjoyment. Land and other natural agents are usually treated as though they were in a class by themselves and are carefully distinguished from the products of human industry and enterprise. These products of industry and enterprise are again subdivided, according to the uses to which they are put, into producers' goods and consumers' goods. Producers' goods include all tools, machines, buildings, appliances, and other forms of equipment



which are used for the production of other goods; while consumers' goods, on the other hand, include only such goods as are used for direct enjoyment rather than for the purpose of producing other goods. Capital includes all producers' goods and some consumers' goods. It includes all producers' goods

because they are used for the purpose of increasing the owner's income. It also includes some consumers' goods because some of these are used by their owners for the purpose of securing an income. A pleasure automobile, for example, which is let for hire is a consumers' good from the standpoint of society; that is, it is not used to produce other goods but is used for direct enjoyment and satisfaction. From the standpoint of its owner, however, it is used to get an income. He gets no consumers' satisfaction out of it, but he gets paid for its use, and this payment is a part of his income. In short, he keeps it for the sake of the income which it brings him. A dwelling house is likewise a consumers' good from the standpoint of society, but if it is rented, it is capital to its owner. He gets no direct satisfaction out of it. He gets money for its use. This money is a part of his income.

Social capital and private income. Some writers have accordingly spoken of two kinds of capital: first, social, or productive, capital; and, second, private, or acquisitive, capital. Social, or productive, capital is identical with producers' goods; private, or acquisitive, capital includes such consumers' goods as are let, rented, or hired by their owners to other people. Consumers' goods, of course, are just as useful as producers' goods, but they are used for different purposes. Therefore private, or acquisitive, capital is just as useful as social, or productive, capital. The owner is just as well entitled to his income in one case as in the other. Capital, then, is goods, but it is that portion of the produced goods in the possession of society which is used by its owners for the purpose of securing income rather than for the purpose of direct enjoyment. It is used by its possessors, however, as distinct from its owners, either for the production of other goods or for direct enjoyment. The possessor of a rented shop is using the shop for productive purposes; the possessor of a rented dwelling house is using it for purposes of direct enjoyment.

Capital a class of goods, not a fund of value. Capital is sometimes conceived of not as a class of goods but as a fund of value.

There are two reasons which lead naturally to this form of statement, but there is danger that this way of thinking may lead us into serious error. In the first place, however capital may have originated historically, one nowadays usually comes into possession of it first in the form of money; that is, the owner of the automobile, the dwelling house, the shop, the factory, usually spent money in order to get it. The possession of money gives one the opportunity to come into possession of these other forms of capital. The purchase of these various forms of capital is usually called investing capital. After one has purchased a shop or a factory, a house which one intends to rent to someone else, or any other income-bearing property one is said to have invested his capital. That sounds as though the money were the capital which one had invested. That is not strictly true. One has merely exchanged one form of capital for another.

Money one form, but only one form, of social capital. The last statement implies that money is a form of capital. This has sometimes been disputed. To be sure, money is not the only form of capital, but it is one form. While it is not correct to say that capital is money, it is correct to say that money is capital. A work horse is likewise a form of capital, but it is not proper to say that capital is a work horse. There is this difference, however, between money and work horses. Very few capitalists ever find that the greater part of their capital is in the form of work horses. Almost every capitalist nowadays finds, at one time or another, that a large part of his capital is in the form of money or has passed through that form. He is continually buying and selling, receiving money and paying out money, and is not receiving work horses and paying out work horses.

Money may be said to be a tool or a means by which the community can do more work than it would be able to do without it. It is, therefore, like other tools, a form of capital. It is also a very important form of capital, one which is continually coming into the possession of every capitalist and be-

ing paid out again. This leads naturally, as suggested above, to the inference that capital consists of a fund of value, or of value expressed in terms of money. While there is no objection to continuing to speak of investing capital when one is only exchanging money for other forms of capital, still one must be on one's guard against assuming that capital is anything else than goods. It is well to remember also that stocks, bonds, mortgages, etc. are not capital, but only evidences of ownership of capital. The shares of the stock of a railroad company, for example, are not themselves capital; they are only evidences of ownership in the railroad itself, which is the real capital.

Another reason which leads naturally to thinking of capital as a fund of value is found in the fact that capital, like all wealth, is measured in terms of value and its quantities expressed in terms of money. There is no good way of saying how much capital there is in any community or in the possession of any individual except by saying it in terms of money. If any capitalist were asked how much capital he possessed, and he were to answer in terms of tons, or cubic feet, or yards, or any other unit of physical measurement, he would not convey any clear or definite idea. Therefore, if you ask any business man to state how much capital he uses in his business he can answer you intelligently only by saying so many dollars or so many dollars' worth. This is a mere quantitative expression. If, however, you were to ask him in what his capital really consists he could answer you intelligently only by giving you an inventory of the various goods which make up his fund of capital. The only exception to this case would be the money lender, whose capital consists solely of money.

Pure capital and capital goods; pure weight and weighty objects. One may, however, reject the idea that capital is money and still persist in the idea that it is a fund of value. The distinction has sometimes been made between pure capital and capital goods, pure capital being a fund of value embodied in the goods, and capital goods being the things themselves in which that fund of value is embodied. The value of the goods

is not capital any more than the weight of an object is the object itself. As stated above, value is the attribute which we use in trying to arrive at a quantitative conception of the real goods. It is the only attribute which they all possess in common and which at the same time indicates their ability to serve the owner's needs. The value, however, is only a symptom of that ability and not a cause of that ability.

The function of productive capital is to aid in production. Except in the case of money it is not the value of the goods which enables them to do their work. The value is only a symptom of the fact that they are doing that work. A producers' good which ceased to aid in production would lose its value; a producers' good which continued to be a real aid in production would retain its value. The value would be the shadow of the real thing and not the substance. Land also has value if it is productive. But it is not the value which makes it productive; it is its productivity which makes it valuable. In this respect capital and land are similar. In the case of that special kind of capital known as money, and in this case alone, its usefulness, its ability to function, depends upon value; in every other case its value depends upon its usefulness or its ability to function.

Capital the result of working and waiting. The next question to arise is, How does capital come into existence? If it consists of tools, buildings, machines, equipment, etc., it is rather obvious that they come into existence because labor is expended in producing them. But this does not tell the whole story. In order that any community may come into possession of a larger stock of tools and equipment, it must, temporarily at any rate, divert its labor force from the production of consumers' goods into the production of these producers' goods. Whether it be a communistic society or an individualistic society this physical fact remains the same. In a communistic society, if the stock of capital goods is to be increased, some labor must be put to work making tools, machines, buildings, equipment, etc., and just that much less labor will be available

during that time for the production of consumers' goods. During this period the community as a whole will have fewer consumers' goods than it otherwise might have had. Of course the expectation is that the tools and equipment, after they are produced and put to use, will add to the total production. This, however, involves a certain amount of postponement of consumption. The community as a whole decides that it will have fewer consumers' goods in the present or immediate future in order that it may have more in the distant future. There is no possibility of evading this physical necessity.

In an individualistic society, however, though the same physical necessity exists, the process is slightly different. Any individual may decide that he will consume a little less in order that he may have a little more to consume in the distant future. The way he does this is to save and invest, or else to turn aside, as may have been done in very simple states of society, from the work of gathering consumers' goods in order to apply himself to the work of making tools.

Making tools rather than consumers' goods. A primitive fisherman has frequently been used as an illustration of this simple process. He has been in the habit of catching fish with very simple tackle, but he sees an opportunity of increasing his catch if only he can get some kind of boat, so he decides to spend a part of the time each day in making one. By this combination of frugality and industry he eventually comes into possession of a boat which thereafter adds to his income and more than compensates him for the frugality which he practiced during the period in which the boat was building. This case is doubtless real enough to serve as an illustration of the essential process of increasing the stock of capital.

It has not been many generations since farmers used very crude and simple implements, some of which they could make for themselves. The farmer who made his own plow was depriving himself of the opportunity for amusement, which is a kind of consumption, or was reducing somewhat his consump-

tion of material goods during the period when the plow was being made. After it was finished it assisted him in producing subsistence and added to his income available for consumption. This is in all essential particulars similar to the case of the primitive fisherman. A little later, however, the farmer, instead of making his own plow, hired a blacksmith to make it, paying the blacksmith money for his work. Here we have the same combination of labor and frugality as in the other cases, the difference being that in the making of the plow the blacksmith does the laboring and the farmer exercises the frugality. With the money which he paid for the plow he could have bought consumers' goods and had immediate enjoyment. He postponed that enjoyment when he paid the money to the blacksmith and received the plow. In the then distant future, however, the plow added to his income and enabled him to make up for the loss of opportunity for immediate consumption, thus compensating him for the postponement which he underwent when he purchased the plow.

The modern farmer, however, instead of hiring the blacksmith to make the plow, usually buys his plow ready-made. So far as he is concerned the act of frugality is the same as though he deliberately hired the blacksmith to make it. He surrenders a certain amount of ready cash with which he might have bought consumers' goods; he receives the plow, which for a period of years will add to his income and therefore compensate him. In the making of the plow, however, there were other tools used, as well as labor. Those other tools had been made in much the same way as the plow. Someone had invested money in them and then hired other labor to use those tools in the making of the plow. It has become, therefore, a very complicated process, but anyone who will analyze the process will find always the same two factors involved; namely, waiting and working,—postponement of consumption, on the one hand, labor, on the other. No capital can ever come into existence without this combination. It is merely obscured by the in-

tricacies of the modern industrial process, and it requires a little more intelligence and study to see clearly where and how the frugality and the labor are combined.

Separation of the functions of working and waiting. In the highly complicated industrial system of the present, with its increase of specialization, the two functions of waiting and working are generally performed by different persons or classes of persons. This has given rise to some of the most intricate and most difficult of our social problems.

The small farmer, for example, who owns his own land and his own teams and farming outfit and who does his own work combines both functions. When he bought his team and outfit out of his own savings, he had to give up, for the present, the means of buying consumers' goods. That is, he had to wait for his consumers' enjoyment until the outfit should begin to earn him something. If, however, he hires someone to do his work, there is a separation of functions.

In a simpler state, in which the same individual exercised both functions, no social or class antagonisms were developed. Even in the intermediate stage, when the farmer bought his plow from the blacksmith and then used it himself, we find both functions performed by the same individuals. Class antagonisms could hardly develop under these conditions. But when, as in the modern industrial system, the capitalist (especially if he be a large capitalist) lives mainly on the interest of capital, while his helpers live mainly on the wages of labor (in other words, when the two functions are sharply separated), class feeling and class antagonism develop. It has come about in our urban industries that the average person who performs manual labor receives his wages in weekly installments and spends them mainly for consumers' goods, whereas the very tools with which he works are owned by other men who have specialized in the function of investing their money in capital; that is, in tools and equipment.

Separation of the functions of the laborer and the capitalist. Capital has existed, of course, as long as tools and equipment

have existed, but this separation of the two functions—that of the laborer and that of the capitalist—has become general only since the rise of machine production. Before that time the function of the capitalist was not important enough to create an opportunity for many men to live exclusively by the performance of this function. Not enough capital was needed in the primitive forms of industry which preceded the present to enable a large number of men to live on its earnings. It is this fact which is probably meant when it is erroneously stated that capital in the modern sense came into existence with the rise of machinery. Capital in the modern sense does not differ from capital in the former or capital in the ancient sense; it differs only in the sense that there is more of it and that it is more needed. This combination of facts—the fact that there is more needed than ever before and that there is more of it supplied than ever before—has created what we call the capitalist class in modern industry, and that is a matter of the very greatest importance.

Coördinating labor which is performed at different times. In a somewhat special but very important sense we may say that the function of capital is to aid in production by coördinating labor which is performed at different times. In the chapter on The Division of Labor it was pointed out that there are two distinct forms of the division of labor; namely, the contemporaneous and the successive. Under our modern industrial system the successive division of labor has been greatly lengthened. In some cases many years elapse between the beginning of a process and the completion of the production of a consumable article, as when mines are opened, ore is smelted, factories are built and equipped, long before we can begin to enjoy the products of the factories. There is a striking analogy between the lengthening out of the successive division of labor and the widening out of the contemporaneous division of labor. The latter has been brought about through improved means of communication and transportation. It is literally true at the present time that thousands of miles or even half the earth's

circumference may separate men who are working for the production of the same article. The coördination of labor performed at such widely separated points of space is one of the most important and striking aspects of the modern industrial system. It is, however, no more important or striking than the similar coördination which has taken place between labor performed at widely separated points of time. Anyone who cares to investigate this needs only to find out how long ago the mills were built which ground the flour that entered into the bread that he ate for dinner, or the factories in which his clothes or his shoes were manufactured. Even the hides from which his shoes are made grew on animals that were born several years ago.

There are various ways in which this coördination of labor performed at different times may be presented to the mind. In a primitive state of industry each unit of labor was performed by men working with few and simple tools. The tools may be said to represent labor performed previously. When the worker uses tools his work at the present time is coördinated with the work of the man who made them. But since the tools were very few and simple, it would be correct to say that a given unit of present labor is being coördinated with a very small amount of past labor. Under modern conditions the average laborer is using more tools, as well as larger and more complicated machinery, than were used by the primitive laborer. These large and complicated machines, like the primitive tools, represent labor performed at a previous time. The labor of the workmen using them is literally being coördinated with the labor of the men who made the machines. Since the tools are so numerous, costly, and complicated, it is correct to say that a given unit of present labor is being coördinated with a large amount of past labor.

One of the fundamental changes which have come about as a result of the modern system of machine production is that of coördinating a given quantity of present labor with a much larger amount of past labor than was the case under simpler

conditions. That is to say, in a simple state of industry a given quantity of present labor would work in coördination with a small amount of past labor. At the present time, however, a given quantity of present labor is found to be working in coördination with a large quantity of past labor.

The coördination of labor performed at different points in space does not take place of its own accord. It is done through agencies of transportation and communication. Similarly, the coördination of labor performed at different points of time does not take place of itself; it takes place because of the willingness of men to wait,—to spend their money for producers' goods rather than for consumers' goods. If no one were willing to wait, if no one were willing to postpone consumption, if everyone insisted on living from hand to mouth as the spendthrift does, there could be no effective coördination of labor performed at different times.

Lengthening the process of production. In order that there may be factories, mines must be opened and ore extracted. No one wants ore for its own sake; it is desired because it is a means of getting something in the distant future which will be desirable for its own sake. Ore must, therefore, be smelted and purified into iron and steel. Again, no one wants iron and steel for their own sake, but solely because in the distant future these commodities will be the means of getting things that are desirable in themselves. Again, iron and steel must be made into machinery. But no one wants machinery for its own sake. Machines are wanted only as they will help to produce things desirable for their own sake. It is this constant looking ahead and taking thought for the future, accompanied by the postponing of present consumption in favor of future consumption, that makes possible the coördination of labor performed at different times.

Combination of factors. Something more than frugality, thrift, and foresight are necessary, however. Without mechanical ingenuity, however frugal, thrifty, and farsighted a person might be, he would find it difficult to exercise these qualities

profitably. Unless someone were able to invent superior methods of production which required the exercise of those qualities they would be of comparatively little economic advantage to those who possessed them.

Here we have an example of a class of cases which continually perplex the amateur student of economics. There are cases where two or more factors are absolutely necessary to get a given result. Fundamentally the problem is no more obscure than that involved in the formula $2 \times 3 = 6$. The students will agree that 2 is just as essential as 3, and 3 as essential as 2, in getting 6. Other problems of a similar kind are found in every field of science as well as in arithmetic. Oxygen and hydrogen are equally necessary to the formation of water; air and gasoline must be mixed in the carburetor in order that there may be an explosion in the gasoline engine. One is as essential as the other. The upper and the nether millstone must work together in the old-fashioned mill to grind wheat. Two sets of rollers are necessary in the modern flour mill.

In the higher realms of economics we find numerous examples of the same type of problem. Forethought and inventiveness are examples of mental qualities which are combined to secure mechanical progress. However inventive men may be in contriving mechanical improvements, unless someone is willing to perform labor long in advance of the consumption of the products of these mechanical improvements, or pay someone else for performing that labor, all these mechanical contrivances will remain either in the brains of the inventors or in museums.

When one has spent his money for iron ore, or for tools of any kind, one has become a capitalist. He has bought something of no immediate use to him as a consumer, but something which is a means by which in the future he may get consumers' goods. Because there are, in any community, men who are willing to do this, there is a market for the genius of the inventor. Similarly, because inventors will devise mechanical appliances and improvements, there is an opportunity for the investor to become a capitalist,—a buyer of tools and contrivances.

These two functions—that of the inventor and that of the investor—are absolutely necessary, whatever the type of social organization may be. Even in a communistic society the work of the inventor amounts to nothing unless the society as a whole undertakes what, in the present order of society, the individual capitalist undertakes; namely, to set men to work at making tools and to pay them wages while they are about it. One important difference between socialism and individualism is this: socialism proposes that society as a whole shall do precisely what in an individualistic society the capitalist does as an individual.

The productivity of capital. There are some extreme socialists who deny that the capitalist performs any necessary function. If that were true it would be hard to frame an argument to show that society as a whole should do precisely what the capitalist is doing. The socialist would then have to admit that the capitalist, instead of performing a useless function, performs a most important one,—so important that society as a whole should take it over. To say that society should do its own investing is to say that it should become its own capitalist. This would present a question to be debated. The question might be stated as follows: Can the useful function of coördinating labor performed at different times be done more economically and satisfactorily by the state, or by society as a whole, than by private individuals? Or the question might be put in this way: What forms of investment and ownership should be undertaken by society as a whole and what should be left to private individuals? Only extremists would refuse to discuss this question. There are, however, some who are so very extreme as to deny that the state or society should do any investing or own any capital. Others go to the opposite extreme by denying that the individual should do any investing or own any capital. Wisdom probably lies somewhere between the two extremes. The real difference, therefore, between the reasonable socialist and the reasonable individualist is one of degree. The reasonable individualist will maintain that, in the absence of a

special or convincing reason to the contrary, the individual should be allowed to invest and to own capital, and that the case must be proved against him before he is forbidden to do so. The reasonable socialist, on the other hand, holds that the presumption is in favor of public and against private ownership of capital,—that, unless special and convincing reason to the contrary is shown, the public and not private individuals should own capital. He places the burden of proof on the one who wishes to own private capital.

CHAPTER XIII

THE RELATION OF THRIFT TO NATION BUILDING

The ultimate purpose of thrift. That increasing supplies of capital, either public or private, are necessary to the attainment of the highest national prosperity, can scarcely be denied. Unless the public should undertake the task of setting aside by law a portion of the national income for the purpose of increasing the fund of capital, it must be done by the action of private individuals. This calls for the exercise of the virtue of thrift.[1]

What is thrift? In order to get a clear idea of the relation of thrift to the strength of the nation it will be necessary to analyze the nature of thrift. To begin with, it should be perfectly clear that thrift does not mean the hoarding of money. To hoard money is one of the most thriftless things one can do with it. The miser of romance who kept his money in a secret hoard where he might gloat over it and enjoy the sensations of feeling, hearing, and seeing it was, in the strictest possible sense, a thriftless consumer of wealth. Instead of using money as a tool of production or instrument of business, he was using it as a means of direct physical enjoyment. To use it for the adornment of his body would scarcely have been more frivolous, thriftless, or selfish.

Spending money wisely. Thrift, no less than extravagance, consists in using money; that is, in spending it. The sole difference is in the purpose or purposes for which it is spent. To spend money for immediate and temporary gratification is extravagance; to spend it for things which add to one's power, mental, physical, moral, or economic, is thrift; to spend it for

[1] See monograph by the author, entitled "War Thrift." Carnegie Endowment for International Peace, 1919.

tools of production wherewith one may increase one's productive power is thrift. For a farmer to spend money on a luxurious automobile, when he needs a tractor with which to cultivate his land, is extravagance; to spend the same amount of money for a tractor, when he needs one with which to cultivate his land more thoroughly and increase his productive power, is thrift. Money is spent as truly in one case as in the other. It stimulates business as effectively in one case as in the other. But when money is spent extravagantly it adds nothing to the productive power either of the individual or of the nation. To spend it thriftily is to add to the productive power of both the individual and the nation.

What if everyone were thrifty. It is sometimes argued, of course, that if everybody spent all his surplus income for tools of production and nobody spent anything for luxuries, there would soon be overproduction; that is, the community would soon have such a supply of tools of production as to enable it to produce more than its thrifty consumers were willing to buy. Whatever validity this argument may have sometime, it would obviously not apply to normal conditions when the danger is not of overproduction but of underproduction; when the problem is not how to consume the things which are produced but how to produce the things which are necessary to the building up of the country; not how to give the people the largest number of pleasurable sensations but how to develop the maximum national strength.

Effects of thrift. The fear of overproduction is groundless, even in normal times. The tendency in a thrifty community is for capital (that is, the tools of production) to increase and become so abundant as to reduce the rate of interest, giving the owners of capital a smaller share of the product and consequently giving the other participants in production a larger share. In addition there is a larger production in a thrifty community because such a community is well supplied with all tools and instruments of production. The danger that there should be an oversupply of capital (that is, of tools) is counter-

acted by the tendency of interest rates to fall, thus reducing somewhat the inducement to save. The economic forces work in precisely the same way to check the overaccumulation of capital as they do to check the overproduction of wheat, potatoes, or anything else. When there is a tendency toward the overproduction of wheat the price tends to fall, and this acts as an automatic check on further production by removing one of the inducements to the production of wheat.

Thrift and overproduction. The theory that too much thrift would result in overproduction is precisely like the theory that too much industry would do the same thing. One might argue that if our moralists and preachers of righteousness continue to extol the virtue of industry and encourage all the people to work rather than to waste their time in sloth and idleness, the people might make the mistake of producing too much. Thrift and industry have very much the same effect in the long run on the total volume of production. Thrift is the means by which the community equips itself with durable goods and with the instruments of production. The community that spends all its income for immediate gratification can never add to its industrial equipment. The community that spends a part of its income not for immediate gratification, but for the distant future, for things which add nothing to its immediate satisfaction but which increase its productive equipment, is a community which grows in productive power from year to year and from generation to generation. Industry without thrift is as ineffective as is thrift without industry. The two together form the twin pillars of all industrial prosperity.

Spending money and hiring labor. What has been said regarding the direction in which money is spent leads naturally to a consideration of the function of the spending of money in giving direction to the national energy. The energy of a community or a nation is directed either by authority or by persuasion. Men do either what they are told or what they are persuaded to do. By persuasion, however, is meant not merely verbal argument and wheedling; it includes the lure of personal

advantage, the desire of pleasing someone whose good-will is esteemed, and a multitude of other things,—in short, it includes practically everything which induces a man to act or which supplies him with motivation, except the fear which lies back of all authority. Not the least important among the various forms of persuasion is the offer of a reward, pecuniary or otherwise. To offer a price for a commodity or a service is to attempt to persuade someone to produce the commodity or to render the service. Among all free peoples this form of persuasion has come to play a very large part in the direction of national energy. The gradual substitution of this form of persuasion for government authority is one of the most significant earmarks of progress. In a low state of civilization and in a militant society men do very largely what they are ordered to do by government authority. In a higher and freer state of civilization they do more and more what they are persuaded to do by the prices which are offered on the market. A high price for one thing and a low price for another mean a larger inducement for the production of one thing and a smaller inducement for the production of the other. A rising price for one thing and a falling price for another represent the attempt of the purchasing public to induce more productive energy to begin producing one thing and less productive energy to remain in the production of the other.

Redirection of national energy. Suppose, for example, it were a foregone conclusion that many more shoes were needed than were in process of production. There would be two ways of increasing the production of shoes. In the one case the government might by its own authority order an increase of production, and detail a certain number of men from other industries or command them to enter the shoemaking industry. In the other case they who want more shoes than they have begin to bid for them and offer higher prices in order to get them. These higher prices have the same effect in redistributing the labor power of the country as the government order would have in the other case. In order to obtain these higher prices, existing factories would speed up, would run overtime,

would employ more men, or else new factories would be built to meet the increasing demand.

In case the desires of the public should undergo a considerable change, and the people should stop caring for one class of commodities and begin caring intensely for an entirely different class, the same alternative methods would present themselves. It would be necessary, of course, in order that production might adjust itself to the demands of the consumers, that considerable productive power should be transferred either directly or indirectly from the industry which was producing the article for which there is a shrinking demand to the industry which was producing the article for which there is an expanding demand. This transfer of productive power could be effected by government authority. The government could merely say to a certain number of men, "Leave this industry and go and work in the other," precisely as soldiers are ordered to transfer their efforts from one part of the field to another. In a low state of civilization this method is used in redistributing the forces of the industrial army, but in all higher civilizations the method is that of persuasion. The article for which the people no longer care will not be bought in large quantities, and the people will not be willing to pay a high price for it. That in itself will partially remove the inducement to production. A certain amount of productive power will therefore be released from this industry. On the other hand, the article for which there is an increasing demand cannot at once be supplied in sufficient quantities to meet that demand. Some consumers will not be able to get what they want, and they will begin bidding against one another for the limited supply, thus forcing the price up. This advance in price is the persuasion which will lead investors, manufacturers, and laborers to go into the industry which produces the article in question. Thus, in the course of time, the transfer of productive power from the contracting to the expanding industry is made as effectively as though it had been made by a government order. It may be made a little less promptly, but much less violently, with less disturbance and with greater econ-

omy. In the industrial field promptness and secrecy are of less importance, and economy is of greater importance. That is why the tendency in all advanced industrial communities is toward the method of price persuasion and away from the method of government compulsion.

Effects of thriftlessness. Before we are in a position to understand the fundamentals of the thrift question it cannot be too much emphasized that in a free industrial society the way in which the people spend their money determines the direction in which the productive energy of the community is utilized. If, for example, no one is willing to purchase tools, or instruments of production, but everyone demands articles of immediate enjoyment, tools will, of course, have no buyers and the tool-making industries will have no inducement to expand or even to continue. All the productive energy will be absorbed by the luxury-producing industries and even they will be poorly equipped, because no one will be willing to invest in equipment. Where one group of people is demanding luxuries for immediate consumption and another group is willing to invest in the tools of production, the latter group may then equip the luxury-producing industries with tools in order to produce for the supply of the former group. If all were willing to spend money on tools and no one were willing to spend very much on extravagant frills, there would be an abundance of tools for the production of all the things which would supply the moderate needs of the community. With these moderate needs supplied by the abundant productive power of the community, the people could work either short hours or in a leisurely manner, or they could use their abundant energy in producing things of durable or permanent value, such as school buildings of architectural beauty, roads, irrigation projects, the drainage of swamps, and in various other enterprises which would provide for posterity, enlarge the possibility of life in the national territory, and greatly expand the national power and greatness.

Spending money for things we like best. If the people of Athens had chosen not to adorn the Acropolis with architectural

monuments, they might for a long time have consumed somewhat more luxurious food, worn somewhat more costly apparel, and amused themselves in somewhat more expensive ways; that is, they could have devoted the national energy to the production of more luxurious food, clothing, and so forth. Instead of that, they chose to consume slightly less luxurious food and to wear slightly less costly clothing than they might have had, in order to erect those buildings which, if the Athenians had done nothing else, would have helped to justify their existence. It was the direction in which they decided to spend their money which decided whether the national energy should be used in the production of ephemeral utilities or durable sources of satisfaction.

The people of those medieval cities who erected cathedrals as monuments of their religious faith could, if they had chosen otherwise, have fed, clothed, and amused themselves in more expensive ways; that is, the man power which was used in the erection of churches could have been used in the production of objects of temporary gratification. They chose to spend their money for durable rather than for perishable goods, and that is why the world was enriched by the religious architecture of the medieval period. Any modern city that chooses to get along with ineffective school buildings can for a few years keep its tax rate down slightly and the people may therefore have a little more money to spend on trivialities. If, on the other hand, they choose to construct school buildings whose architecture will enrich the world as did the church architecture of the medieval period, they will have to cut down the amount of money which they would spend for other things and release a certain amount of productive energy from the manufacture of frills and luxuries, so as to make it available for the production of these objects of durable satisfaction.

Whether one thinks that it was the thrift or the extravagance of the Athenians that built the Parthenon will depend upon whether one thinks that the building of the Parthenon was an important thing to do or not. If he regards it as a triviality, then he will call the building of it an extravagance, and

doubtless think how much better it would have been if the Athenians had used the same amount of money in purchasing and the same amount of energy in producing things which would have fed their bellies or adorned their bodies. If, on the other hand, he thinks that it was a very important thing to do—more important than anything else that they could probably have done with their money and their productive energy—he will say that it was thrift which built the Parthenon. The same question might be discussed with respect to the religious architecture of the Middle Ages, and the same question, of course, arises in every city of the present day when the problem of school architecture is discussed. To one who regards school architecture as a triviality the erection of magnificent and well-equipped school buildings would seem an extravagance; he would doubtless regret that so much productive power should be used in the building of such things when it might be used for the production of articles that would gratify the appetite or some other temporary desire. But to one who regards school architecture as something very important, the erection of such school buildings as some people would like to see would seem an act of thrift.

Summary. The general argument for thrift may be summarized as follows: He who saves money and invests it wisely does himself good in two ways. He gains directly by having an income in addition to his wages or his salary. He gains indirectly by making better conditions for everybody, including himself.

It is easy to see that he gains directly. To have a hundred dollars invested, even at 4 per cent, is better than not to have it. It gives him four dollars a year over and above his other income; and four dollars a year, small as it is, is not to be despised.

It is not so easy to see, but it is none the less true, that saving and wise investing make conditions better for everybody, including oneself. To save and invest, as stated above, is not to hoard. It is to buy things which are needed for pro-

duction or defense instead of things which are good only for consumption or pleasure. To buy things, such as tools, machines, buildings, etc., which aid in production is to encourage the making of such things. When many people are investing in tools, many tools will be produced and industry will then be well equipped with aids to production. In short, there will be many factories well equipped with buildings, machines, and materials. That is a condition in which there is much employment.

One may buy either directly or indirectly those things which aid in production. When a farmer buys a traction engine rather than a luxurious automobile he is buying directly a thing which aids in production, rather than an article of consumption. If he has bought wisely the traction engine will aid him to grow a larger crop, which is a good thing for him. It will also increase the food supply, which is a good thing for everybody. The more farmers there are who save money and invest it in instruments which aid in production, the better production we shall have and the better the world will be fed. When a factory owner builds an addition to his factory rather than a new dwelling house, he is buying directly various things which aid in production. If he builds wisely he will add to his income, which is a good thing for him. It will also add to the productive power of the community, which is a good thing for everybody. It is a good thing especially for laborers, because it will require more laborers to run the enlarged factory than were required before it was enlarged. In short, it increases the demand for labor.

The more people there are who save their money and buy tractors, machines, factory buildings, and all other aids to production, the better the community will be supplied with all such things. The better the community is supplied with all such things, the greater its productive power and the greater the opportunities for productive employment. That is the reason why laborers always emigrate from a country where there is little saving and investing to a country where there is much saving and investing.

Indirect buying of producers' goods. But one may buy indirectly things which aid in production. When one deposits money in a savings bank, the bank will invest it. It may lend it to some farmer who wants to buy a tractor, a team, a cow, or some other aid to production. It may buy part ownership in some factory or in some other way encourage the buying of aids to production. The saver may himself buy the share in some corporation. In that case he becomes a part owner in the factory or whatever it is that the corporation owns. In all these ways and in many others one may buy indirectly all sorts of things which aid in production.

Indirect buying of such things has the same effect as direct buying. It encourages others to make the tools, machines, buildings, and other things which aid in production. Nobody would make such things unless somebody would buy and pay for them. The only people who buy and pay for them are those who save and invest, who buy fewer articles of consumption than they might buy, and who spend the money thus saved for things which aid in production. That is what it means to save and invest.

CHAPTER XIV

FORMS OF BUSINESS ORGANIZATION

Large capital necessary. The growth of machine production is the result of mechanical invention, but it has, in turn, made necessary such large aggregations of capital as to require the combined accumulations of numbers of men. In comparatively few cases does a single individual possess enough capital to equip a modern factory, railroad, steamship company, mine, or even a large mercantile house. Were it not possible to combine the capital of a number of individuals, large-scale production would be the privilege of only a few very wealthy men.

Methods of combining capital. There are three distinct methods of combining capital: one is known as the partnership; another is the corporation, or joint-stock company; and the third is the coöperative society. The partnership is a simple combination of two or more individuals in the ownership and management of a given business, in which each partner is fully responsible for the acts and liabilities of the group. The partnership is merely an enlargement of the individual. The individual who owns and operates his own business is, of course, fully responsible for all debts and obligations, and, subject to bankruptcy and homestead laws, all his property may be taken in payment of any obligation incurred in the business. Where two or more men join in a partnership each partner is responsible in the same sense and to the same extent as if he were the sole owner.

Difficulties of partnership. Obviously a partnership on these terms is possible only among men who are very intimately acquainted with one another and who have complete confidence in one another. Since each partner is fully responsible for the

acts of every other, it would be extremely hazardous, not to say foolhardy, for anyone to form a partnership with an individual with whom he was not intimately acquainted and concerning whose honesty and solvency he had the slightest suspicion. Incompetent or dishonest partners have caused the financial ruin of many an otherwise sound and capable business man.

The corporation. The modern expansion of business would hardly have been possible without some form of organization which would permit the association of larger numbers of men than are possible under a partnership. This has given rise to the corporation, or the joint-stock company. The distinguishing difference between the corporation and the partnership lies in what is known as limited liability. In a corporation the liability of each shareholder is strictly limited. The corporation may become bankrupt, but the individual members or shareholders can be called upon only for definite sums to make good the debts of the corporation. In the ordinary case each individual puts a certain sum of money into the fund. This may be lost, but he cannot be called upon for additional sums to make good further losses. In other cases, such as our national banks, the shareholder may not only lose what he has put into the fund but may be assessed an equal amount in addition. This is sometimes called double liability, but even in this case the shareholder's liability is limited and his whole property is not hazarded as it is in a partnership.

Suppose, for example, it were considered necessary to have $100,000 of capital with which to start a business. This capital may be divided into a thousand shares of $100 each. (A larger number of shares of smaller denomination or a smaller number of larger denomination may, of course, be decided upon.) These shares are represented by bits of printed paper which serve as evidence to show that the money has been put into the fund. A thousand different individuals may buy one share each, or a smaller number may each buy a different number of shares. For each $100 which any individual puts in he receives one of these bits of paper, which have come to be called

shares, or stock certificates, or some other such name. After the shares are all sold, there is the fund of $100,000 in money available for starting the business. The general rule is that each contributor shall have a vote for each share which he has purchased. It would, therefore, be possible for one individual to own more than half the shares, provided he had invested more than $50,000 in the enterprise. Owning more than half the shares, he could always cast the majority vote and control the corporation, electing himself and his particular friends to all the offices and virtually controlling the business. In some cases, however, such a concentration of ownership is not permitted.

Limited liability. Only the officers of the corporation are empowered to act for the corporation; the individual shareholder who is not an officer has no power to obligate the corporation in any way. One therefore does not need to scrutinize the solvency or the character of his fellow shareholders as closely as would be necessary in a partnership. Again, the individual shareholder has no responsibility for the acts of the corporation beyond that which has already been indicated; that is, if the business fails, the affairs of the corporation may be wound up, but he can lose only the sum which he originally subscribed, or, in the case of double liability, that sum plus an equal sum.

Some weaknesses of the corporation. This device of the joint-stock company with limited liability has made possible the aggregation of vast sums of capital, running up into millions and hundreds of millions of dollars, for the purpose of carrying on great business enterprises. Individuals who never saw or heard of one another, living in different parts of the country, sometimes in different parts of the world, may own shares in the same corporation, having contributed their capital to the joint fund for the carrying on of the business. This has been one of the great factors in building up all modern enterprise. It is almost as important as some of the great mechanical inventions. But, like all great inventions, it carries with it certain difficulties. For example, it has made individual enter-

prise a practical impossibility, except in those cases where small-scale production is as efficient as large-scale production. On the other hand, it has given individuals with only small sums of capital to invest the opportunity to participate in the profits of large-scale production. In the latter sense it has been a democratic institution. The fact, however, that individuals vote in proportion to the number of shares which they own has tended to destroy some of the democracy and, in some cases at least, to put the management of the corporation into the hands of a plutocratic oligarchy; that is, a few large stockholders who control the majority of the stock can always control the corporation, sometimes to the disadvantage of the small shareholders, who can never cast a majority vote. Various limitations upon the voting power have been proposed and introduced for the purpose of curbing the rapacity of the large shareholders. In spite of these, however, many a fortune has been built up through the machinations of large shareholders and the robbing of small shareholders.

Multiplied power and divided responsibility. Another disadvantage of the corporation is found in its impersonal character. A decade or so ago the social psychologists were engaged with the problem of the mob mind. Before the analysis was carried very far it was discovered that the mob mind did not present any special mystery as distinct from the individual mind. The mob thinks and acts as any of its individuals would think or act, were his power greatly increased and his sense of responsibility greatly diminished. That is precisely what the presence of numbers does for the individual when the totality is moved by a common impulse—it gives him a sense of power proportionate to the numbers, and at the same time the very fact of numbers diminishes his own sense of responsibility. That is why the mob is so like a monster, for the difference between a man and a monster is precisely that,—the monster feels a sense of power but lacks a sense of responsibility.

Something of the kind exists in the case of the industrial

corporation. There also you have increased power and diminished responsibility. The sense of power comes not so much from the presence of numbers—as in the case of the mob—as from the larger fund of competitive capital which is brought together. The diminished sense of responsibility comes partly from the mere fact of numbers (no individual member of the corporation feels the full responsibility for the acts of the whole), partly from the impersonal character of the conduct of the corporation, and partly from the limited-liability feature of most of the charters. Most of the evils of corporation practice grow out of this simple situation, and the remedy must be applied at this point. The sense of responsibility must be made commensurate with the sense of power.

This is to be accomplished not by reducing the powers of corporations so much as by increasing the sense of responsibility of its individual members. If they can be made to feel the same responsibility for the acts of the corporation which they feel for their individual acts, the corporation problem as such will be solved; and it will be solved in no other way. This means the frank adoption of the maxim that crime is always personal and that corporate law-breaking is to be dealt with in precisely the same way as individual law-breaking.

Size a matter of importance. In fact, it may be necessary to go even farther and enforce stricter responsibility upon members of corporations—particularly the larger corporations—than we do upon individuals. If the principle we have laid down is sound, it furnishes no support to the view that the mere bigness of a corporation is not a matter for the law to take into account. From our point of view bigness is an important factor in the problem; for the bigger the corporation, the greater its power and the less the sense of responsibility on the part of each member. This situation alone calls increasingly for strict regulation and enforcement of responsibility, the bigger the corporation becomes. Its increased power is a good thing, provided that power be used productively and not acquisitively;

but there is no certainty that it will be used productively unless subjected to the strictest control.

This does not mean that large corporations have worse dispositions than small ones or that their members are meaner men than the members of small corporations. It means only that the disproportion between power and responsibility increases with the size of the corporation.

As a homely illustration let us take the common house cat, whose diminutive size makes her a safe inmate of our household in spite of her playful disposition and her liking for animal food. If, without the slightest change of character or disposition, she were suddenly enlarged to the dimensions of a tiger, we should at least want her to be muzzled and to have her claws trimmed; whereas if she were to assume the dimensions of a mastodon, I doubt whether any of us would want to live in the same house with her. And it would be useless to argue that her nature had not changed—that she was just as amiable as ever, and no more carnivorous than she always had been. Nor would it convince us to be told that her productivity had greatly increased and that she could now catch more mice in a minute than she formerly could in a week. We should be afraid lest, in a playful mood, she might set a paw upon us, to the detriment of our epidermis, or that in her large-scale mouse-catching she might not always discriminate between us and mice.

Stratification of society. There is another problem, not strictly a corporation problem but a social problem, growing out of the prevalence of the corporate form of industrial organization; that is, the problem of the widening gap between employers and employed, or, more strictly, between capitalists and laborers. It may be laid down as a general social law that anything which separates people into sharply distinguishable groups—whether it be a geographical boundary, a racial difference, a difference of religious creeds, or a class distinction—will produce between the groups thus separated, first, ignorance of one another, then suspicion growing out of that ignorance,

then misunderstanding growing out of that ignorance and suspicion, and, finally, open warfare whenever a pretext is found; whereas anything which bridges over these gaps, or brings people together regularly and normally, creates, first, knowledge of one another, then confidence instead of suspicion, then understanding instead of misunderstanding, and, finally, lasting peace because no difficulty seems large enough to serve as a pretext for war.

Now the joint-stock form of organization, though a most effective industrial device, has had at least one serious social result: it has widened somewhat the gap which would otherwise have existed between the employing group and the employed group. When employers are known by their personality and can come into some kind of personal or direct contact with employees and when, therefore, employer and employee know something about one another, there can be no such degree of suspicion of one another as now exists; where ignorance disappears, suspicion tends to disappear also. But when employers stand, as the shareholders of a corporation, in a purely impersonal relation to employees,—when the average employer or shareholder knows nothing personal about the employees of the corporation and the employees know absolutely nothing personal about the shareholding employers,—there is on either side of the line about as great a degree of ignorance of those on the other side as can be found anywhere in modern social life.

Widening the gap between social classes. The gap which separates the two groups is made so wide as to produce very much the same result as is produced by a difference of color between races or a difference of religion between two sharply contrasted religious groups. Such a state of things has never failed in the history of the world to produce suspicion, jealousy, misunderstanding, and, on the slightest pretext, open hostility; and, so far as we are able to see into the future, there is not the slightest ground for hoping that such a condition will ever fail to pro-

duce these same undesirable results. In other words, we need not hope for social peace or for any cessation of the conflict of classes until that chasm is in some way bridged over or made to disappear.

This result can hardly be achieved by doing away with joint-stock corporations,—they are too effective as industrial devices to make such a program tolerable. But if we are ever to have anything resembling social peace, some way must be found to bring the employing classes and the employed into personal relationship one with another. The ideal is undoubtedly that of having the workers in our industrial establishments become also owners of the stock of the corporation. If that result could possibly be achieved, there would be an end of the present phase of warfare.

How this is to be achieved is another question. It will never be achieved until our corporation laws and our judicial procedure relating to corporations are made efficient enough to make it a safe venture for a man of small means to buy a share in an industrial corporation. So long as these things are so inefficient as to enable large shareholders and rings to "freeze out" the small shareholders, or in any way to make it hazardous for a man of small means—such as the average workingman—to invest in a share, it will never be accomplished. This looks like a legal problem rather than a legislative problem, and it is for the legal fraternity and the courts to solve.

The trust. It is important that we distinguish between the corporation, as we have just described it, and the *trust*, or *combine*. The corporation is an organization of individuals who put their capital together in order to carry on a business which requires more capital than is likely to be possessed by any one of them. The trust, or combine, is mainly an organization of corporations (though it may include also a few individual capitalists) for the purpose of controlling the market. While such organizations are to be distinguished sharply from corporations as such, nevertheless they could scarcely have come into ex-

istence if the corporation had not preceded them and prepared the way. They may therefore be called extreme developments of the corporation idea, though not necessary developments. As to these extreme developments of the corporation principle, it is becoming more and more apparent that their power for evil lies wholly in their power of controlling and manipulating prices. If that power could be taken out of their hands, we should then have nothing to fear from them.

Control of prices. If they could not succeed in competition through their power over prices, they could then succeed only through their power of production. If they should then survive, the mere fact of their survival would prove their fitness to survive. This has been pointed out many times by scholars, but the practical politicians, with their unerring instinct for the wrong way, have ignored it and have been trying various hard and useless methods of dealing with the problem. Eventually, after having tried every possible way of going wrong, we shall apply the simple and direct remedy of government control of prices wherever a monopoly exists.

It is not necessary to indulge in any sentimental rhapsodies on the subject of the people and their control over affairs of this kind. Government affairs are controlled by politicians, and politicians are no more interested in the people than are the trust magnates themselves. The choice is a hard one. But where competition fails to regulate prices, these prices are going to be fixed arbitrarily by someone. In the absence of government control they are fixed by the trust operators alone. Where there is government control they are fixed by the joint action of the politicians and the trust operators. Their interests are not the same; and, as the result of their pulling and hauling, prices will not be fixed quite so completely in the interest of the trusts but more in the interest of the trusts and the politicians. Since the people can control the trusts after a fashion by refusing to buy from them, and the politicians after a fashion by refusing to vote for them, it will happen that

through this double control the interests of the people will be somewhat better safeguarded than they are now.

Incidentally this would destroy most of the trusts. No trust exists by virtue of its superior productive powers. Each one depends for its existence upon its superiority in buying and selling; that is, upon its power over prices. Take away this power and enable the outside concerns to match their productivity against that of the trust, and outside competition will increase, forcing the trust to break up into its most efficient *productive* units, as distinguished from the most efficient bargaining units.

The coöperative society. It has often been proposed to substitute a radically different form of business organization for the corporation, or joint-stock company. This is known as the coöperative society. In a sense the corporation itself is coöperative, but it differs from the coöperative society in two fundamental characteristics: In the first place, the corporation involves coöperation among the owners, whereas a genuine coöperative society involves coöperation among the workers. In the discussion of the corporation it was pointed out that the rise of modern industrial conditions had brought about a sharp separation of owners and workers. In the original form of manufacturing (that is, the small shop, where the workman owned the shop and the tools) we had the functions of ownership and of labor combined in the same individual. With the rise of the factory system these two functions were separated. The corporation represents the organization of owners and maintains the separation of owners from workers. The coöperative society, on the other hand, represents an association of workers. Under the corporation, ownership and management go together; under the coöperative society, labor and management go together. In the second place, in a corporation, as we have seen, the various individuals who contribute capital vote in proportion to the number of shares which they own. In a coöperative society each individual has one vote, regardless of the number of shares which he owns or the amount of capital which he has put in. One man one vote is the rule here, where-

as one share one vote is the rule of the corporation. It is inaccurate, however, to say that capital votes in a corporation.

As to the comparative merits of these two forms of organization, the opinion of the world is somewhat divided. It must be admitted that the corporation has had much the larger growth, though in recent years the coöperative society has been gaining ground rapidly.

Comparative merits of the corporation and the coöperative society. It is the opinion of the present writer that the question will always be decided on rather definite economic grounds. Where the difficult problem is that of getting sufficient capital, he who supplies the capital must be placated; that is to say, where everything else is easily obtainable, where there are always plenty of laborers seeking employment, plenty of raw material to be had, and buyers ready to buy the finished product, but where the limiting factor is capital and the puzzling thing is to know where to get it, favorable terms must be offered to the capitalist and he must be allowed to have his way, or the capital cannot be secured. In the early stages of manufacturing expansion, capital was the limiting factor.

The limiting factor will dominate. Now and then conditions arise under which capital is not the limiting factor. Among farmers, for example, where a creamery is needed, it is never very difficult to raise capital to equip the creamery; the difficulty is to get business,—that is, to get the farmers to produce the milk and sell the cream to the creamery. In these cases the producer of milk must be placated and persuaded to join the organization. He must, therefore, be given control. This gives rise to what is known as the coöperative creamery, in which the producing farmers own the plant, direct its management, and share in its profits. Such a creamery, however, is coöperative only in a special sense. The men who work in the creamery are employed as other laborers would be employed in a privately owned factory of any kind. A coöperative store is likewise dependent upon custom. It is easier to get capital and to hire clerks and salesmen than it is to induce people to trade at

the store. Therefore the patrons of the store must be placated and given control. The great coöperative societies, as pointed out in the chapter on Competition, have been societies where coöperative buying and selling has been substituted for competitive buying and selling. That is, they have been mercantile societies. They do not represent coöperation among producers or among the workers in the stores and factories, for the workers in the stores and factories are hired on the same terms as workers in the privately owned or corporation-owned stores and factories; in short, they are not examples of pure coöperation but of quasi coöperation; that is, they are cases of coöperative buying or selling among independent producers and not of coöperative production.

There are a few cases of real coöperation, but they are not very conspicuous. The only real coöperation is that which obtains among workers, where the men who do the work in a factory manage it themselves or direct its management and furnish or hire the capital. This form of coöperation has not yet proved very successful, mainly because labor has seldom been the limiting factor. It is generally so easy to get labor that the laborer does not have to be placated and given much control. When the time comes, as it probably will, that labor is scarce and hard to find,—when it is necessary to placate the laborer rather than the capitalist or the purchaser of finished products,—then we may expect that this form of coöperation will gain ground. If the laborer has to be placated in order to induce him to work in an establishment, he will be given more and more control over it.

Control by the indispensable person. Generally speaking, the indispensable man, whether he be the one who furnishes capital, the one who furnishes raw material (as in the case of the coöperative creamery), the one who buys the finished product (as in the case of the coöperative store), or the one who supplies the labor (as in the case of the true coöperative society), is in so strong a position that he can dictate terms to all the others. When the laborer becomes indispensable (that is, so

scarce and hard to find that the average business enterprise must wait on his will) he will be in so strong a position that he can dictate terms to all the others who participate in the enterprise. He will then, without resort to force, really direct its management on a purely voluntary and contractual basis. There is not a very good prospect for coöperation among laborers under any other conditions. There is a strong probability that, with the rapid accumulation of capital (especially if habits of frugality and saving are encouraged) and with the growing scarcity of labor (especially if wise immigration laws are passed and a high standard of living among laborers is encouraged), there will come a time when capital will be almost superfluous because of its great abundance, and every individual laborer will become almost indispensable because of the scarcity of labor. Then we must expect that capital will lose the power to direct the management of industries and will take the position of a hireling. The laborer will then gain control and assume the position of the master. This mastery, however, will not be acquired by force, unless we lapse into savagery. It will be acquired as a logical result of the fact that the individual laborer, instead of being superfluous and easily spared, as is the case when labor is oversupplied, has become either indispensable or difficult to spare because of the scarcity of laborers. By voluntary agreement in the free and open market he can then get his full share of the control of industry.

CHAPTER XV

ECONOMICAL USE OF LABOR ON LAND

Product per acre and product per laborer. The economical use of land presents two somewhat distinct but closely related problems: first, the economical use of labor on land; second, the economizing of land itself. The first problem is that of so managing labor on land as to get the maximum product per unit of labor; the other is that of so handling the land as to get the maximum product per acre. In a country where there is an abundance of land still unused and of good quality, the first is the only problem of immediate importance. In an older and more densely populated country, where land is becoming scarce, the second problem rises to importance. Even in the latter case, however, the main problem is always that of getting the maximum product per unit of the population. It is this which will give the maximum average well-being for the population. But if land is strictly limited and very scarce, a large product per acre is absolutely necessary in order that there may be the maximum product per unit of the population.

What does "land" include? In most economic discussions the word "land" is used to include all natural agents,—forests, waterfalls, minerals, and everything else provided by nature for man's occupation and use. But under our legal system the ownership of a piece of land or a section of the earth's surface carries with it the use of the air above it, the sunlight that falls upon it, the rain, the dew, and everything else that cannot be separated from it. In some cases this ownership includes the minerals that lie beneath the surface.

Colonizing. The problem of getting the most out of these natural resources with the prevailing supply of labor is one of

the most important of all questions of national economy. The problem of getting the maximum product per unit of labor has been discussed in the preceding chapters under such headings as The Division of Labor, The Use of Power, The Use of Capital, and Forms of Business Organization. There are many other methods, however, by which the product per unit of labor may be increased. Among these must be mentioned that of territorial expansion of the population or the sending out of colonies. This is a means by which more land is made available for the existing population than would be the case if it did not expand or colonize.

It is probably no accident that every great race has been a colonizing race. There is no reason to believe, however, that it was the colonization that made it a great race, rather than that the greatness of the race enabled it to colonize. A great race must be made up of vigorous and efficient people. Such people are likely to succeed wherever they go. They make successful colonists, for the simple reason that when they emigrate and come into competition with other races they are more than likely to succeed in that competition. Having great physical vigor and energy, a high degree of mentality, considerable knowledge of and control over the forces of nature, and a temperamental development that enables them to work together efficiently, they are very likely to succeed in competition with outlying races. If in addition to this they waste less of their energy in distrust and suspicion of one another, if they have a keener sense of justice and no disposition to sacrifice the interests of society for the weak and inefficient, such people may easily spread over outlying lands, buy them from the natives, and succeed by virtue of their superior mastery of the arts of production. On the other hand, the members of a weak race are not uniformly successful when they emigrate and come into contact with other peoples. Such individuals incline to stay at home, where they can protect themselves by special political and legal institutions against the competition of outside peoples. The surplus population, instead of moving out and colonizing

those sections of the earth where its labor would be most productive, remains within the confines of its own country and tends to overpopulate that territory.

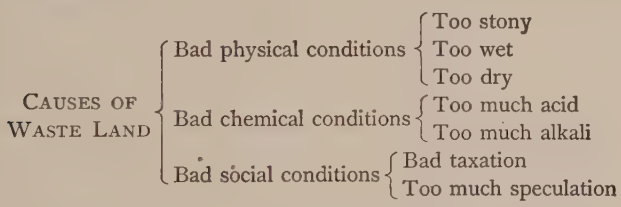
Expanding and pent-up civilizations. This difference in the characteristics of the members of different races will explain two very different types of civilization, one of which may be called the expanding type and the other the pent-up type. Under the expanding type of civilization the people spread out. They go where the natural opportunities for the productive use of labor are greatest. They are vigorous and capable enough to be willing to take their chances anywhere in competition with members of any other race. Under the pent-up type of civilization the people incline to keep within the boundaries of their own country or their own neighborhoods, where they enjoy at least some protection from outside competition or have some little outward advantage to help to balance the disadvantages of their own individual weaknesses or inefficiency. A country populated by such people generally tends to become overpopulated and to maintain a very low standard of living. In such a country the death rate eventually rises to balance the birth rate, or else the birth rate falls to balance the death rate.

Expanding the indoor industries. When the people of a country are too far advanced in civilization to be willing to acquire new lands by military conquest or to force themselves as colonists upon other countries unwilling to receive them, and are therefore unable to acquire any new land, one of the most important of all questions is that of economizing the land already in their possession. One way of accomplishing this is to turn from the industries that require much land in proportion to the product to those industries that require little land. A mechanically expert nation may turn to the manufacturing industries, bringing the products of land from distant countries where land is still abundant, working them over in the factories at home, and selling the finished products again to other outside people. By this process a country can support a vast population for which its own land would not provide food enough. This

method, however, is always more or less hazardous because of the possibility of a cutting off of its sources of raw materials or of the market for its finished products. A country is in a much safer position if it can so utilize its land as to support its population from the products of its own soil.

Making better use of soil. In most countries, especially in the United States, the soil itself is by far the greatest physical resource. The products of the soil exceed in value many times those of the mines and the fisheries. Besides, if the soil is properly treated it may continue producing its wealth and maintaining its population for indefinite periods of time.

One of the first methods of securing a more economical use of the land of a country is that which is generally known as reclamation; that is, the bringing into use of land hitherto unfit for cultivation. The methods of reclamation are determined chiefly by the kinds of waste land or the reasons why the land has been unfit for cultivation. These reasons are in the main as follows:[1]



Causes of waste land. If all the land of a country were once brought under cultivation, there would be no way of economizing it except by making each acre produce more. But this is a condition which has probably never been reached in any country, certainly not in the United States. Therefore we have first to consider the question of bringing waste lands into use. Let us assume that the country is all "settled"; that is, that the population has increased and spread until all the land which is sufficiently productive to attract cultivators has

[1] Compare the author's work, "Principles of Rural Economics," pp. 132 et seq. Ginn and Company, Boston.

actually been appropriated. In this case the existence of waste land will be due to one or more of three causes: (1) bad physical conditions, (2) bad chemical conditions, (3) bad political conditions.

Bad physical conditions. There are many physical conditions which might be described as bad, any of which would tend to make land unattractive to cultivators and therefore to cause it to go to waste. There are, however, three characteristic conditions which cause considerable quantities of land of three different types to go to waste. These are represented by the lands described above as (1) too stony, (2) too wet, (3) too dry.

Stony land. In the North Atlantic states of the United States the first of these conditions is the most conspicuous of the causes of waste land; that is, most of the waste land is too stony, though there are some swamps there also. Along the southern seaboard and the Gulf coast the second of these conditions is the most conspicuous; that is, most of the waste land is too wet, though there are occasional patches of stony ground. But over a vast area in the Far West, comprising fully a third of the entire area of the United States, the land is too dry, and much of it goes to waste on that account. There is enough of this land to support an empire, were it not for the absence of the one missing factor,—water. The early settlers in the eastern half of this country found another condition which gave them a great deal of trouble, namely, the presence of forests which had to be cleared; but this is not a condition which creates a problem for the rural economist today. In fact it is now much more of a problem to preserve our forests than to find ways of clearing the land of them.

Of the land which is now going to waste because of its rocky condition, much of it is so exceedingly rocky as to make it forever useless as plowland or even for pasture. It would cost so much to clear it of stones that one could never hope to secure sufficient returns to repay the cost. Such land, however, need not go to waste. It is our natural forest land. With the growth of population the demand for timber continues to increase, and

with the clearing of the virgin forests the supply continues to diminish. The time is not far distant when the products of the forest will be in such demand as to make even the rockiest of our hill lands valuable, provided they have been allowed to grow up to trees.

This does not mean that these rocky hills are better for trees than are the more level and tillable lands of the valleys and plains. But the latter lands can be used for the growing of field and garden crops, whereas the rocky hills cannot. It is a wise economy, therefore, to devote these hills to the one purpose for which they are suited, reserving the tillable lands for other purposes. Besides the timber, these rocky and semimountainous lands are of some value as deer parks and game preserves. The supply of venison and other game which such lands will furnish, while of small value in comparison with the products of rich pastures devoted to the growing of domestic animals, is not a matter to be despised, especially when we consider that it produces itself without cost in the way of labor or care.

One difficulty in the way of the full utilization of land of this description for purposes of forestry is the slowness with which returns come in. It takes at least thirty years, more frequently fifty years, for a tree to grow to a usable size. So long a period of waiting is unattractive to the average individual, partly because of the limited span of human life and partly because of the shortness of human foresight. Another difficulty lies in the fact that the work of reforesting the rocky lands, to be effective, must be carried out on a considerable scale. This seems to call naturally for state and government enterprise. Since governments do not need to count on a natural death, they need not be deterred by the long period of waiting involved in forestry. A half century or even a century is not too long for a government to wait for returns, provided they are desirable.

The reclamation of stony land in this country has hitherto been mainly a matter of private enterprise. The individual farmer on such land has with his own labor, or at least under his own management, done the work of clearing.

Wet land. The problem of reclaiming wet land has attracted more public attention, and much more has been done by public enterprise in this direction than in the reclaiming of stony land. There are several reasons for this. In the first place, drainage operations sometimes have to be carried on over a considerable area in order to find a suitable outlet. These large areas are frequently beyond the control of any individual or firm, and in some cases they extend beyond the state boundaries, so that two or more states are involved in the project. In such cases the enterprise can be successfully carried out only under state or national management. Another reason for the public interest in this problem is that, in addition to the economic value of the land that is reclaimed, there is the positive menace to health of unreclaimed swamp land. Drainage may, therefore, be a matter of public interest for sanitary reasons alone.

The appeal to the imagination which such enterprises make is not to be ignored. Such lands are usually exceedingly fertile when drained. They have for ages received the washings from the higher lands surrounding them and are prevented from becoming highly fertile only by the excess of water. Anyone who has lived on or traveled across lands of this kind and seen what remarkable results have accrued from successful drainage operations must have been stirred to some degree of enthusiasm. Much of the most fertile land of England, especially in the eastern counties, was at one time fen, or swamp land. The drainage and reclamation of these lands have to be counted among the greatest achievements of English genius. In the process of nation building they would have to be named among the chief contributors to the greatness of the British nation.

The case of Holland. Even more striking results are found in Holland, much of whose land has been reclaimed by very laborious methods. In fact, a great deal of the most fertile land of Holland today lies below the level of the sea and is made available for human habitation and the support of human life by extensive drainage operations supplemented by pumping on a large scale. One of the most interesting examples is that

of what was formerly Haarlem Lake. Before 1839 this was a body of water covering approximately forty-two thousand acres at an average depth of a little over thirteen feet. In fact, considerable traffic by boat was maintained on this lake among the towns situated on its border. Before deciding to drain the lake it was, therefore, necessary to provide a substitute in the way of transportation facilities between these towns. Accordingly a canal was built around the border of the lake, having a total length of thirty-eight miles, a depth of nine feet, and a width of a hundred and fifteen to a hundred and thirty feet. This not only provided for traffic by boat among the towns that had grown up but it was high enough to drain by gravitation into the sea. The water from the lake, however, had to be lifted into this canal, and this was done by three gigantic plants, each one capable of pumping a million tons in twenty-five and one-half hours. It took three years of constant pumping to empty the lake, and the pumping plants have had to be kept intact ever since in order to safeguard against flooding. As soon as the lake was pumped dry the sale of land began, and the total price of $3,760,000 was realized. This was not enough to pay the cost of reclamation; but there were other advantages, such as the improvement in health and the safeguarding of the towns around its border against high water, from which they had suffered several times before.

Swamps in the United States. In the United States it is estimated that there are somewhere between sixty and eighty million acres of swamp land capable of ultimate reclamation. These are widely distributed, but there are several special sections where these lands are located in considerable quantities: first, the Atlantic Coastal Plain (especially from Virginia to Florida); second, the lower Mississippi Valley; third, the northern halves of the three states of Michigan, Wisconsin, and Minnesota. There are numerous other small areas of considerable importance in themselves, such as the Sacramento and San Joaquin River valleys of central California. When all these swamp lands are drained and brought under cultivation it is

not improbable that they will easily support two million families. Allowing five persons to the family, this will add ten million to the number of people who can be supported within the present boundaries of the United States.

In addition to the reclamation of swamp land (that is, of land too wet for any kind of cultivation), there is the vast problem of draining land which is capable of cultivation in ordinary weather but on which crops are subject to injury by wet weather. This can hardly be called reclamation in the strictest sense, and yet it is of great economic importance in that it adds greatly to the productivity of the land already under cultivation or capable of cultivation. Throughout the greater part of the territory east of the Missouri and Mississippi Rivers crops probably suffer in the long run more from wet than from dry weather. The irrigation of these lands is, therefore, not considered of immediate importance, though as a safeguard against occasional spells of dry weather it may ultimately be considered an economic possibility. Drainage, however, as a means of preventing the evil effects of spells of wet weather has since 1870 had considerable development and is certain to have more in the future.

Dry land. The problem of reclaiming dry land has received even more public attention in this country and throughout the world than that of reclaiming either stony or wet land. One obvious reason is that there is much more dry than wet land in this country and in the world. More than half of the land of the world which would otherwise be tillable is either uncultivated or very meagerly cultivated because of the scarcity of moisture. Fully half of the land of this country otherwise tillable suffers also from lack of moisture. Relatively speaking, it is generally assumed that the ninety-eighth meridian comes as near being the dividing line between the humid and the arid sections of the country as any line that can be selected.

The distance along the ninety-eighth meridian from the Canadian border to the Rio Grande is approximately fifteen hundred miles. Aside from the lack of water this land would cross

practically no waste land; that is to say, the land is smooth, is free from stones, and possesses a deep soil rich in plant food. These conditions continue westward as far as the Rocky Mountains, an average distance of more than two hundred miles. The acreage included in this strip is slightly greater than that of France and almost equal to that of the former German Empire. Yet the lack of water prevents it and will continue to prevent it from supporting a dense population unless that difficulty can be overcome.

There are two recognized methods of dealing with the problem of dry land. The first goes under the name of dry farming, which consists in the economizing and conserving of the limited moisture supplied by the rains and the dews; the other is irrigation, which consists in conducting water from the mountain streams and distributing it over the tillable lands of the valleys and the plains.

Dry farming. While irrigation is the more spectacular method of the two and, wherever streams are available, is vastly to be preferred, nevertheless it is limited in its scope and has never been used so widely as the other method. Much of the agriculture of the world has always been carried on under what we call in this country conditions of dry farming; that is, under conditions where the farmer's chief problem was that of economizing, conserving, and utilizing to the fullest extent a very limited supply of moisture. The methods of dry farming fall in turn into two main classes: first, those that prevent the waste of the existing supply of moisture; second, the planting of crops that are adapted to dry soils (that is, crops that will mature with a minimum supply of moisture). There are in turn two methods of preventing the waste of the existing supply of moisture: one is to prevent the rainfall from running away in the streams by enabling it to soak into the ground as quickly and easily as possible. Many of the rains of these arid regions come in the form of torrential showers. If the surface is hard and baked, much of this rain will run away in the streams and never soak into the soil at all. If, however, the soil is thoroughly

broken and loosened, it soaks in much more rapidly, and much less of it, therefore, will be lost in the streams. The other method is to prevent, as far as possible, the loss by evaporation. In the intense heat of the summer, especially if the winds are very deficient in moisture, this occasions considerable loss. Fortunately the same method which will enable the rain to sink readily into the soil tends to prevent or reduce to a minimum the loss by evaporation; that is, if the surface of the soil is kept broken and loose the moisture from below does not rise by capillarity near enough to the surface to come in direct contact with the winds—in other words, it remains below the surface where it may be reached by the roots of the plants.

Drought-resisting crops. The selection of drought-resisting crops contains many possibilities and appeals to the imagination, especially, because of the element of discovery and adventure which it involves. As suggested above, the greater part of the surface of the earth is dry: the vast steppes of central Asia, the greater portion of Africa (practically all of it, in fact, except the great Congo Basin), and all of South America except the great Amazon Valley are dry countries. The exploration of these vast areas for the discovery of plants that flourish there and that may be of use to man has only begun. No one can tell what possibilities may lie hidden there. Already, however, a beginning has been made, and a number of drought-resisting crops have been introduced, including some near relatives of wheat and various sorghums, sunflowers, etc. No one can yet say how far a combination of these methods of saving the moisture and introducing drought-resisting plants may enable us to utilize effectively the vast dry areas of this country. One can at least say, however, that there is a possibility that sometime the greater part of our Far West will be growing crops of some kind.

Irrigation. While the methods of dry farming are historically quite as old as the methods of irrigation and have been carried on over much wider areas, still public discussion of irrigation is much older in this country than is that of dry farming, partly,

perhaps, because, as suggested above, where water is available for irrigation it represents undoubtedly a very much more effective method of reclamation than does dry farming. Since the very earliest settlements of our Far West, irrigation enterprises have been carried on either on a small or on a large scale. In fact the prehistoric inhabitants of some sections of our Far West made use of it. The early Spanish missionaries also constructed irrigation works around their missions. The first development of irrigation on a comprehensive scale, however, was undertaken by the Mormons, immediately after the founding of their colony on the Great Salt Lake in 1849. Having chosen to abide in what to all appearances was a desert, they were compelled by the very necessities of existence to put water upon the land in order to provide themselves with subsistence. Under the spur of this necessity they worked with an energy and intelligence that have seldom been equaled. The prosperity of the Mormon community is based primarily on the irrigation ditch. The second attempt on a comprehensive scale was at Greeley, Colorado, where the coöperative principle was applied, though the coöperators were not held together by a common religious belief. Somewhat later, and partly as the result of the examples of Salt Lake City and Greeley, Colorado, an era of speculation in irrigated lands developed, especially in California. One writer has said, "Where Utah and Colorado depended only upon their hands and teams for the building of irrigation works, California issued stocks and bonds and so mortgaged its future."[1] That is to say, instead of the prospective farmers' taking their own teams and with their own labor building their own ditches, money was raised by the sale of bonds, and with this money men were hired to build the dams and dig the ditches. Under this method a number of irrigation works were built and, where properly built, served the needs of agriculture; but in many cases the people who had put their money into the shares of the irrigation companies never got it back. So frequently was

[1] Elwood Mead, "Rise and Future of Irrigation in the United States," in *Yearbook of the United States Department of Agriculture, 1899.*

this the case that it became difficult to raise money by this method. The next stage in the development of irrigation policy was the constructing of irrigation systems by state or government enterprise. The reclamation policy of the Federal government is characteristic of this method. Under this policy a considerable area is selected as suitable for irrigation on account of its contour, its proximity to streams, and the ease of distributing water by gravitation. The whole project is surveyed, the dams and ditches are built, and then the land is opened to settlement by actual farmers, each farmer paying his prorata share of the actual cost of the irrigation system. Even under this method, however, it has frequently been the case that the cost of irrigation was so great that the farmer had to pay rather more than his land was worth after it was irrigated. Eventually, however, when the demand for agricultural products increases with our growing population, and the price of agricultural products rises, the value of the land will undoubtedly increase sufficiently to cover the cost of construction.

Bad chemical conditions. Comparatively little public attention has been given to the reclamation of lands that are unused because of bad chemical conditions. A great deal of the land of the eastern third of the United States contains too much acid and requires constant applications of lime. This, however, has never been considered a subject for public enterprise. The individual farmer can probably apply lime to his individual farm quite as efficiently as it could be applied by any large company or the state or the nation. The problem of alkali land is a little more baffling. Where most of the moisture that sinks into the soil never runs away, but rises to the surface and is carried away by evaporation, the soluble salts are never leached out, but come to the surface and are left when the water evaporates. In some cases the first few inches of surface become so impregnated as to prevent the growth of useful plants. In general the methods of dealing with alkali land are as easily within the reach of the average farmer as of the state or nation. In mild cases deep plowing, by means of which the surface

where the alkali is too abundant is turned under and soil suitable for plant growth is thrown onto the surface, is sufficient. If in addition to this the surface is kept broken so that the process of evaporation is retarded, it is unlikely that another crust of alkali will form on the top. In very bad cases, however, it appears that nothing but underdrainage will cure the difficulty; that is, where the water containing considerable quantities of alkali in solution is drained off and not allowed to come to the surface and evaporate, the cure is permanent. Something can also be done by introducing crops which tolerate considerable quantities of alkali. The sugar beet has been found to be one of the most tolerant of all our crops toward alkaline conditions. Experiments have been made with Australian saltbushes. Alfalfa is mildly tolerant and is a prodigiously profitable crop on certain lands that are mildly alkaline.

Bad political conditions. Under bad political conditions we might include a good many things that would be subjects of controversy. There is no doubt, however, that a repressive system of taxation or a condition of government which would make farmers uncertain as to the results of their farming would have a powerful influence in causing land to go to waste. In the earliest settlement of our Western lands the Federal government's purpose was to replenish its treasury from land sales and to pay off its national debt. So long as this policy was followed strictly there was little inducement to actual settlement, but much inducement to speculation in Western lands; that is, they were bought up in considerable tracts by men who had considerable funds of money to invest. Gradually, however, a different policy was adopted, culminating in the Homestead Act of 1862, under which land was given without money and without price to any qualified settler who would live on it and cultivate it for five years. This method undoubtedly encouraged the rapid settlement of our Western lands much more effectually than the earlier policy had done. An unstable local government in which the farmer's property is not adequately protected against town marauders or other depredators is one

of the most effective causes of waste land. This is especially true of small holders, who could, if they were properly encouraged, grow a considerable proportion of their subsistence in their own gardens. If one's garden, however, is not safe and is liable to be despoiled, or its products stolen, the would-be gardener has little encouragement to maintain a garden. It is well understood that one of the greatest obstacles in the way of sheep husbandry in this country is the depredation of the town dog, which could easily be eliminated if the public had the intelligence to deal with it in a vigorous manner.

CHAPTER XVI

ECONOMIZING LAND

In a new country where land is abundant and labor scarce the problem of economizing land is never acute. The tendency is to economize labor to the maximum and to use land merely as a means to that end. This frequently results in a wasteful use of land. In old and thickly settled countries, however, the problem of economizing land tends to become almost as important as that of economizing labor. In fact, in densely overpopulated countries men are sometimes regarded as the cheapest and land as the most precious of national assets. Even where men are properly regarded as the greatest asset, the problem of conserving and economizing land or natural resources is a very serious one.

Land, however, has many properties, and some of these properties do not need to be economized, either because they cannot be exhausted or because they are not scarce. The following classification shows the properties that need to be economized.

A. Noneconomic { 1. Solidity; 2. Extension } *B.* Economic { 1. Location; 2. Fertility; 3. Minerals }

Noneconomic properties of land. Some of the physical and geometric properties of land which are the most fundamental are not the most important from an economic point of view. The solidity of the earth which serves to support our weight, and that of the buildings which we erect and the plants which we grow, is of course essential to our very existence. It is not a matter of the greatest economic interest, however, because it is not so scarce as some other properties. Rocky or desert land, of which there is an abundance, furnishes support as well as

fertile land. The quality of extension (that is, superficial area) is also essential. It is this which enables us to catch and utilize the sun's rays, the rain, and the dew. It is this which provides room for plants to grow, to spread their roots to the soil and their leaves to the air. It is this which furnishes space for the erection of buildings and the carrying on of all activities. This quality of extension, however, is possessed by sterile as well as by fertile land, and by land which is badly located as well as by that which is well located.

Economic properties. Location may also be said to be a geometric property of land. It is a matter of great economic importance because there is such a scarcity of land in the best locations. By location is meant proximity and convenience of access to markets, roads, schools, scenery, and various other desirable things. Some land is greatly superior to other land in this respect, and this creates a great difference in the desirability of different lands. Location is the chief, almost the only factor in determining the value of urban land. In a place where multitudes of people desire to live, land is necessarily scarce, but the scarcity is that of land well located for urban purposes; that is, for business or for the dwellings of those who have to live within reach of the business establishments. Moreover, the differences in the value of lands within a city are due almost wholly to differences in location. In agricultural communities location is a factor, but not the only nor the most important factor, in determining land values. Nearness to markets or to railroads, the character of the wagon roads, accessibility to schools and other social advantages, count for much; but the character of the soil and the subsoil, the climate, the moisture, and the other factors which determine plant growth count far more. All these factors which promote plant growth may be grouped under the name "fertility." In that case we may say that from an economic point of view location and fertility are the most important properties of agricultural land.

Good location saves transportation. When we look for the reason why location is a matter of such importance we must

recall the fact that man's chief work, on the physical side, is the moving of materials. It is this which requires power; and power is costly, whether it be generated in the human body and exercised through the muscles, or whether it be developed in the bodies of animals or through mechanical agents. One very important phase of the work of moving materials is that of marketing products. The nearer a body of land is to a market and the better the means of transportation, the less labor and power it takes to get its products to market. On land which is well located with respect to markets it is therefore possible to utilize labor more efficiently than on land which is badly located.

It is also costly to move man himself. It is therefore advantageous that he should live in close proximity to his work. If he lives far away the cost of transportation is greater and the labor force of the community is less efficiently applied than if he lives close by. Even though the trolley fare is the same for a long distance as for a short distance, transportation costs more over the long distance. In the first place, it takes a longer time and the passenger loses that time. In the second place, it costs the transportation company more, and that extra cost must ultimately reduce the total productive power of the community. The extra labor required to transport passengers a longer distance might otherwise be used in other lines of production. However, the sheer scarcity of land, both for business and for residence purposes, forces the population to spread and makes long-distance transportation necessary, however costly it may be.

In proportion as transportation can be cheapened, in that proportion will questions of location become of less importance from the standpoint of production. From the standpoint of consumption or direct enjoyment cheapened transportation would apparently make little difference. Certain neighborhoods, because of neighbors, scenery, fashion, and a variety of reasons, would still be preferred to others. If one could imagine costless transportation, such as is pictured in the Arabian Nights by the story of the magic rug, on which one could be

instantly transported to any distance, one location would be as desirable for production as another; that is to say, if there were no difference between two pieces of land in fertility or in anything else except location, they would be equally desirable. It would cost no more to transport products to market or men to and from their work in one case than in another. So far as location is concerned there would be no scarcity of land until all the unoccupied portions of the earth were occupied and utilized. In short, such a perfect system of transportation would vastly increase our available supply of unsalable land.

While it is obvious that no such instantaneous and costless system of transportation will ever be devised, it is equally obvious that the more nearly we can approach that system the more land we shall have available for all sorts of purposes. It is the superiority of modern as compared with earlier means of transportation which makes possible those vast aggregations of people known as cities. They can draw their supplies from greater distances and in greater abundance than would be possible with less efficient means of transportation. Ancient cities that were situated on navigable rivers or on the seashore had the advantage of water transportation, which, even before the days of steamships, was fairly cheap and efficient. Nonperishable products, such as wheat, could then and can still be transported long distances in sailing vessels at low cost. Consequently, where water transportation was possible, cities of considerable size grew up long before the days of steam railways. But inland cities, such as many of those which dot the maps of every progressive country, would have been an impossibility.

Access to food supplies. It seems to be a general rule, applying to all forms of life, that numbers depend upon food supply. Where food is abundant, numbers may be large. Since food comes ultimately from the soil, the capacity of the soil to produce food places a limit upon numbers. One of two things must, of course, follow: a large population must either spread over wide areas of land in order to find sufficient food, or it must

transport food from these wide areas where it is produced to the densely populated centers where the people live. Certain birds reverse this process and manage to live a part of the time in large flocks and transport themselves to and from their feeding-grounds. If they are strong fliers, as were the wild pigeons which formerly inhabited this continent, they may feed over large areas and return to their roosting-places at night. It was their remarkable powers of flight which enabled such vast numbers to roost in the same locality; otherwise they would have been compelled to break up into smaller flocks in order to live nearer their feeding-grounds. The same law seems to apply to human flocks. If we were not able to transport food and other supplies such long distances our large cities would be compelled to scatter and we should have to build many smaller cities, or else live as scattered families, in order to be nearer the sources of supply. Even with our present means of transportation there are limits beyond which it does not seem to be advantageous to concentrate our population. Consequently we find many small cities and towns whose people live by the indoor industries. They are nearer sources of supplies of various kinds, besides having more room for their own industries.

Increasing floor space by erecting tall buildings. The necessity for room for the indoor industries can be supplied in part by tall buildings. Floor space can be increased by as many stories as can be built, subtracting, of course, the space necessary for elevators, stairways, airshafts, etc. But after a very moderate height is reached, the cost of construction increases more than in proportion to the added floor space. To add one more story on the top of a tall building requires stronger walls all the way down and also a better foundation. Besides, it costs more to carry the building materials to the greater height and the cost of elevator service to the top floor is somewhat higher than for lower floors. A twenty-story building is of a very moderate height in some of our large cities, where land is very scarce, but even this height would be absolutely unprofitable in a town where there was plenty of room on the ground.

Streets. The traffic needs of a busy population also make demands upon land for streets. Much the same methods are used to economize land for street purposes as for building purposes. The building of subways, sub-subways, elevated roads, and viaducts is a familiar method. It used to be suggested in a jocular way that a road through the air would also economize land. Flying machines may eventually transform that joke into a real economy. Superior pavements for the support of larger and more powerful vehicles will also economize road space somewhat by permitting more traffic to be carried on over a street of given width.

Economizing agricultural land. These methods of economizing land are suited to urban rather than to rural districts. Space is required in agriculture, as suggested above, for the utilization of solar energy, soil, and moisture in plant growth. "Two-story farming," as Professor J. Russell Smith calls it, consists in growing tree crops and ground crops underneath the trees. Some space can be saved in this way, where there is plenty of sunlight, soil, and moisture, but not very much. It enables the plants to utilize sunlight a little more effectively, perhaps, because the low-growing plants can use that which filters through the foliage of the trees; but if the trees use too much (that is, if the low-growing plants are shaded too much) their development is retarded. There may be some economy of soil fertility also if the trees send their roots deeper than the smaller plants. In that case the two kinds of growth do not compete directly for soil fertility. Where an abundance of artificial fertilizer can be used and water for irrigation is plentiful, an adequate supply of plant food and moisture can be supplied to both kinds of vegetation. In this case the limiting factor is sunlight. This is a factor for which we have not yet found a good substitute. Therefore we must continue to spread our cultivation over wider areas if we are to support larger populations.

Intensive cultivation. There are two somewhat distinct methods of getting a larger product from the land already under

cultivation. One is the more intensive cultivation of existing crops; the other is the substitution of heavy-yielding for light-yielding crops. The chief difficulty with the method of intensive cultivation is, of course, the well-known law of diminishing returns. This has already been discussed in Chapter IX and will be treated with greater detail in Chapters XIV and XXXIII. It will be sufficient at this point to remark that in order to double the yield of any given crop under ordinary conditions it will require more than double amounts of labor or capital in the cultivation of the land; or, in more general terms, to get an increased product from land requires a more than proportionally increased application of labor and capital to its cultivation.

Intensive farming. "Two-story farming" is only one phase of intensive agriculture, which may be defined as the use of large quantities of labor and capital in the cultivation of relatively small areas of land in order to get large crops per unit of land; that is, large crops per acre. As pointed out in Chapter XV extreme efforts to increase the productivity of land tend to decrease the productivity of labor; that is, to reduce the product per unit of labor. When a country becomes thickly populated, however, if its people are unwilling to migrate to countries where land is abundant the problem of economizing land becomes one of great importance. So long as it can find markets for the products of indoor industries, it may bring the products of the soil from less densely populated countries. When these outside markets cease to expand, and it is therefore compelled to live more and more from the products of its own soil, it must perforce get more and more out of its soil. Intensive agriculture is then forced upon it. Yet as a matter of observed fact intensive agriculture the world over is associated with the poverty of those who actually work on the soil, though it may be also associated with the riches of those who own the soil.

Intensive farming and poverty. This impoverishment of the worker on the soil where the latter is intensively cultivated is not absolutely necessary except where the intensive cultivation

is carried to extremes. It is a necessary result, however, if the attempt is made to wrest a larger crop from the soil by the mere application of more and more labor to each acre of land. The yield is found not to increase in proportion as the labor is increased, which necessarily means a smaller product per man. But if more capital is used, as well as more labor, particularly if better methods of cultivation are adopted and carried out by means of the larger use of capital, increasing yields per acre may be secured for a time and up to a certain point without any diminution of yield per unit of labor. By using more power and larger tools in order to plow deeper and prepare a better seed bed, a given amount of labor may cultivate the same acreage of land as before and yet get a larger yield per acre. This would also give a larger yield per man. Again, by cultivating a slightly smaller acreage and cultivating it more thoroughly by means of better tools, the same product per man may be secured and a somewhat larger population may be supported without any diminution in average income. But experience shows that wherever even this process is carried too far a smaller product per man, and consequent poverty, will be the result.

A seeming exception to this rule (but it is only a seeming exception) is found when a few cultivators turn from the growing of staple crops to the growing of high-priced specialties. Only a few can do this, for the reason that the market is very limited. The mass of the farming population must grow the crops which feed and clothe the people. Those who do succeed in the production of agricultural specialties may manage to make good incomes from very small plots of land. This does not prove by any means that the growers of wheat or beef could do likewise. So long as consumers demand wheat bread and beef as parts of a steady diet, they must draw their subsistence from considerable areas, for these products can be most economically produced by what are commonly known as extensive methods of cultivation.

The other possibility—that of substituting heavy-yielding for light-yielding crops—may be considered as a separate

method or as a special application of the method of intensive cultivation. The simple fact is that some crops, such as wheat, do not respond very vigorously to intensive cultivation, whereas other crops, such as Indian corn, potatoes, sugar beets, and many of the standard vegetables, respond much more vigorously. In other words, in the growing of a crop of wheat it is impossible, except by the most laborious and expensive methods, to quadruple the average yield of fifteen bushels to the acre, and there is no authentic case on record up to the present moment to show that a hundred bushels of wheat have ever been grown on an acre. With the potato, however, the limit is not very well marked. While the average crop is less than a hundred bushels to the acre, crops of five hundred bushels are by no means uncommon, and special crops of a thousand bushels or more to the acre are well authenticated.

Kinds of food that require wide acreage. It happens that two of our standard articles of diet—namely, wheat flour and beef—are most economically grown under conditions of extensive cultivation. This explains, doubtless, why wheat tends to be a frontier crop, and beef likewise. Thirty bushels of wheat to the acre are a very good yield even under intensive cultivation, and are about twice the average yield in this country; but sixty bushels of corn to the acre are quite as easily produced as thirty bushels of wheat. The food value of sixty bushels of corn is almost double that of thirty bushels of wheat. According to Atwater's tables it is 1.86 times as great. Under conditions of fairly good cultivation, therefore, 1.86 times as many people could be supported on corn as on wheat, assuming that the land in question is equally suitable for either crop. The great advantage of wheat, however, is that it stands transportation better than corn, and also that power-driven machinery can be used a little more effectively in growing and harvesting it. So long as there are vast areas of frontier lands available as a source of food it will continue to be economical to make use of them,—in other words, it will continue to be economical to consume wheat flour,—but as our population increases, corn tends

to crowd out wheat and the Corn Belt to spread at the expense of the Wheat Belt. This is limited, however, by the fact that wheat will grow in drier and, especially, in colder land than corn. There is much good wheat land that will scarcely grow corn at all. Such land will, of course, continue to grow wheat or some other drought-resisting or cold-resisting crop.

The yield of an acre of beans under conditions or fair cultivation is equal in food value to 1.29 times that of wheat, whereas under conditions of fair cultivation an acre of potatoes yields 2.06 times the food value of an acre of wheat, and the sweet potato, on land and under a climate suitable for its cultivation, yields 4.82 times the food value of an acre of wheat. It is obvious, therefore, that when the arid regions which now supply wheat to the densely populated areas of the world fail to be adequate, much more food can be secured from the humid regions and much more life supported if the people will consent to consume a little less of the light-yielding and a little more of the heavy-yielding crops.

Beef, like wheat, is an economical form of food so long as an adequate supply can be secured from what would otherwise be waste land. In other words, so long as there are arid regions unsuitable for anything but pasturage, and so long as these dry pastures can supply us with an adequate quantity of beef, it will be economical to continue consuming beef as a standard article of diet; but when beef from this source proves inadequate, it will be very expensive to consume beef grown on land which would yield vastly more food if devoted to other crops. In fact, an acre of good corn land devoted to pasturage and beef-growing yields less than one tenth as much food value as the same acre would if devoted to growing corn.

Turning to heavy-yielding crops. If people would change their habits of consumption and consume products which could be economically produced under intensive methods, or products which are capable of yielding large quantities of food per acre, much land could be saved; in other words, a much larger population could be supported from a given area.

The following table shows the estimated power of an acre of land under good cultivation—but not the most intensive cultivation—to produce food of different kinds:

	Food Value per Pound in Calories[1]	Pounds per Acre (Good Yield)	Calories per Acre	Ratio to Wheat as Basis (per cent)
Entire wheat flour	1660	1,800	2,988,000	100
Native beef (as purchased)	1130	200	226,000	7
Mutton (as purchased)	1275	250	318,750	11
Whole milk	325	4,000	1,300,000	43
Corn meal (unbolted)	1550	3,600	5,580,000	186
Oatmeal	1860	1,800	3,348,000	112
Rice	1630	2,400	3,912,000	131
Rye meal as flour	1630	1,800	2,934,000	98
Beans	1590	2,400	3,816,000	129
Potatoes	325	24,000	7,800,000	260
Sweet potatoes	480	30,000	14,400,000	482

Of course there are elements of food value other than the heat-producing elements, but this table is enough to indicate that some economy of land could be effected by consuming other and more heavy-yielding crops than wheat and beef. Even these economies of land, however, might be gained by a less economical use of labor. While wheat and beef require considerable areas of land for their most economical production, they can be produced with comparatively small quantities of labor where the conditions are right. On our Western wheat farms, for example, where powerful machinery can be used, a small number of men can grow and harvest a very large acreage of wheat. On our Western cattle ranges also a small number of men can care for large numbers of cattle pasturing over very wide areas. If we did not have land enough for these purposes and had to support a growing population from our own soil, potatoes, sweet potatoes, corn, beans, milk, and milk products in the form of butter and cheese would support many more people than could be supported on wheat and beef. We

[1] From *Bulletin 28*, United States Department of Agriculture, Office of Experiment Stations. Government Printing Office, 1896.

must bear in mind also that vast areas comprising more than half the land surface of the globe are too dry for anything but grazing. Their only possible food product is and will continue to be meat. Considerable quantities of reindeer meat can also, it is now believed, be grown in the far-northern regions of America, Europe, and Asia.

The banana and the date. Certain tropical countries have great advantages in the way of food production on small areas. Concerning the banana Humboldt wrote: "I doubt if there exists another plant on the globe, which, on a small space of ground, can produce so considerable a mass of nourishment. . . . The product of bananas is to that of wheat as 133:1, to that of potatoes as 44:1." In Arabia and northern Africa the date is very prolific and in favorable locations produces large quantities of food.[1]

Turning to the indoor industries. It is not likely to be repeated too often that the favorite method of economizing land and supporting a large population is to give up trying to be physically self-supporting and try to become commercially self-supporting. By being physically self-supporting is meant producing from our own soil all or practically all that we need. By becoming commercially self-supporting is meant bringing in the products of the soil from other countries, selling to those countries in return the products of the mines and the indoor industries. The products of the indoor industries may themselves be made from imported raw materials. In this case we bring in raw materials, work them up into finished products, and sell them again to outside people, living ourselves upon the profits of the transaction. We virtually sell our labor to other nations.

This method of building up a great population has such vast possibilities, provided we are so situated as to be able to do it, as to appeal powerfully to the imagination of statesmen and nation-builders. If outside markets fail, then we must turn to

[1] Cf. Buckle, History of Civilization in England, chap. xi. London, 1857–1861.

the development of our own soil, for in that case we must become physically self-supporting.

The pent-up versus the expanding type of civilization. Even though we aim to become physically self-supporting we have two distinct lines of development open to us: one is to develop an oriental, or pent-up, type of civilization; the other is to develop an occidental, or expanding, type of civilization. By an oriental, or pent-up, type of civilization is meant one in which we try to live on our existing area of land and to support a growing population without adding to our productive area. This leads to a gradually increasing intensity of cultivation and a gradual lowering of the standard of living of those who work on the soil, and eventually of the masses of the people. By an occidental, or expanding, type of civilization is meant one in which the effort is made to maintain the standard of living and the product per man in a growing population by widening our cultivated area rather than by cultivating the original area more intensively. If we had been developing a pent-up civilization we should never have spread, say, outside of the original thirteen states, but should have tried to support our increasing numbers by cultivating the soil more and more intensively. Indeed, we should probably not have left Europe in the first place, unless it had been to escape persecution. We have preferred to expand over more land rather than to try to live on the original area, whatever that original area might have been. It is difficult to see where this tendency will lead us, but it is a rather striking fact that from the Greeks down to the nations of the present every great European nation has been a colonizing nation. Thus people have preferred to go where land was abundant rather than to stay where population was dense. Unless we change our habit very decidedly we shall try to maintain our standard of living. When this cannot be achieved by intensive cultivation we shall swarm or send out colonists; that is, some people will emigrate. The only alternative would be the maintenance of a stationary population through birth control.

The table on the following page shows, roughly, the area of land which it takes to produce, under fairly good agriculture, the food of a soldier for a year.

This does not take into consideration the land necessary to clothe him or to feed the horses which are used to cultivate the land. If we assume that an average family of five persons will consume as much as do three soldiers, we shall conclude that it takes nine acres to produce food for a family. Besides, the land must grow feed for the horse that plows and cultivates it. According to the United States Census, in the great farming area of the upper Mississippi Valley there is one farm horse for every thirteen acres under cultivation. If, to be fairly liberal, one horse is sufficient to cultivate on the average fourteen acres, we might conclude that one horse could furnish the power necessary to cultivate enough land to grow the food for one family (nine acres) and for himself besides (five acres), or a total of fourteen.

The yields assumed in the table on page 255 are not unusually large, being about the same as those in England and other well-cultivated countries; but they are about twice the average yields in this and other new countries.

One very important part of the problem of economizing land is that of preserving and improving its present fertility. This is to be done mainly by careful management of the soil. Crop rotation, a proper balance between plant-growing and animal husbandry in order to supply natural manure, and an increased use of chemical fertilizers are the main parts of a policy of soil conservation. How important an item natural manure is in our national economy may be shown by the following facts: It has been conservatively estimated[1] that the value of the animal manure of the country exceeds two billion dollars ($2,225,700,000). This is greater than the combined value of all the mineral output and the entire timber cut of the country at the time the estimate was made. If one third of this is wasted, it amounts to a sum much greater than the value of the

[1] *Farmers' Bulletin 192*, p. 5, United States Department of Agriculture.

STANDARD RATION FOR UNITED STATES ARMY

Articles Consumed[1]	Ounces etc. per Day	Pounds per Year	Good Yield in Pounds per Acre	Acres required to produce Yearly Ration
Beef, fresh	20.	456.25	200	2.28
Flour	18.	410.6	1,200	.34
Baking powder	.08			
Beans	2.4	55.	2,400	.022
Potatoes	20.	456.25	12,000	.038
Prunes	1.28	29.2	3,000	.009
Coffee, roasted and ground	1.12	25.55	4,800	.005
Sugar	3.2	73.	2,500	.029
Milk, evaporated, unsweetened	.5	11.5	625	.018
Vinegar	.16 gill	14.6	3,000	.004
Salt	.64 oz.			
Pepper, black	.04			
Cinnamon	.014			
Lard	.64	14.6	300	.048
Butter	.5	11.5	75	.153
Sirup	.32 gill	29.2	2,500	.01
Flavoring extract, lemon	.014			
			Total	2.956 (Roughly, 3 acres)

entire timber cut of the country. Clearly the conservation of our animal manure is one of our greatest conservation problems.[2] The increasing use of chemical fertilizers, however, is necessary if we are to make increasing drafts upon the soil in order to feed our increasing population.

[1] Cf. "United States Army Regulations, 1913" (corrected to April 15, 1917), paragraph 1205, p. 240. Government Printing Office, Washington, 1917.

[2] "The Organization of a Rural Community," *Yearbook of the United States Department of Agriculture, 1914.*

CHAPTER XVII

THE BALANCING OF THE FACTORS OF PRODUCTION

Balanced rations, fertilizers, etc. Every farmer nowadays is familiar with the idea of a balanced ration for his live stock and a balanced fertilizer for his soil. Students of human dietetics also are familiar with the idea of a balanced ration for man. By a balanced ration is meant one which contains the different food elements in the proportion in which the body needs them. By a balanced fertilizer is meant either one which contains the different elements of plant food in the proportion in which plants need them, or one which will balance up the soil and put into it the elements of plant food which it lacks. Thus, a soil that is rich in nitrogen but deficient in potash would need a fertilizer that was particularly rich in potash. Not long ago the writer was at the home of a professor of agriculture in one of our leading agricultural colleges. The grass was growing up between the bricks in the sidewalk in front of the agriculturist's house. As a demonstration he was using fertilizer to kill the grass. It was excellent fertilizer, and in the proper relation it would have made the grass grow more luxuriantly. He simply put on too much, and the result of the bad balance was to kill the grass. In addition to those elements of plant food which ordinarily go into the fertilizer, moisture and other factors are required. If there is too much of one and too little of another factor, plants will not grow. Everyone is familiar with the fact that on swampy land plants will not grow because there is too much water, and that on desert land they will not grow because there is too little.

Balanced ingredients. All these facts are mentioned to make it perfectly clear to the student that in almost any line of

production the question of the balance of factors is a very important one. All the factors may be present, but if they are not in the right proportions, production will be reduced or even destroyed. This is true not only of the elements of plant and animal growth, which are agents of production, but of tools, implements, raw materials, and other things which enter into a mechanical industry. In the manufacture of old-fashioned gunpowder, for example, charcoal, saltpeter, and sulphur were required, and they had to be combined in fairly definite proportions. If it happened that there was more charcoal on the market than would combine with the limited supply of one of the other ingredients, say saltpeter, the production of gunpowder was limited by the small supply of saltpeter and not by the supply of charcoal. Only as much gunpowder could be manufactured as the small supply of saltpeter would permit. In the making of old-fashioned mortar, lime and sand were required. Too much of either one or too little of the other would spoil the mortar. If in any given situation there should happen to be a scarcity of sand, very little lime could be used, because only as much mortar could be made as the limited supply of sand would permit. Again, however abundant both lime and sand might be for the making of mortar, if brick and stone were scarce, very little mortar could be used, and there would, therefore, be very little productive demand for sand and lime.

Balanced agents of production. This principle applies not only to the raw materials which are used in various lines of production but to the active agents themselves, such as labor. However numerous the hodcarriers might be, if there were a scarcity of brick and stone masons not many hodcarriers could be used. The farmer who had plenty of land and tools, but no horses, oxen, or tractors, would not be able to use either his land or his tools effectively. If he could not raise the money in any other way, it would pay him to sell some of his tools or some of his land and buy horses in order to restore the balance. At bottom this is much the same problem as that of balancing rations or fertilizers. Again, however much land he might

possess, if he lacked equipment his farm would not be very productive. It would pay him, if he could not raise the money in any other way, to sell some of his land in order to buy equipment of various kinds. Some of our frontier farmers found themselves in possession of a soil which was very rich in plant food. They lacked, however, other forms of capital, or the money wherewith to purchase building materials, machinery, live stock, etc. Many of them virtually sold their surplus soil; that is, they grew such crops as they could, sold them, and took no pains to replace the fertility which was used up in the growing of the crops. They are said to have "mined the soil"; that is to say, as the miner extracts his mineral and puts nothing back, so many of these frontier farmers extracted plant food and put nothing back. Whatever may be said of this from the point of view of national policy, it was, under the circumstances, undoubtedly good business from the point of view of the farmer. He was trying to balance up his establishment. Having an abundance of plant food in his soil, but very little of anything else, he found it to his advantage to sell some of his plant food in order to put up houses, barns, and fences and purchase machinery and live stock. He was doing virtually the same thing that another farmer would do who found himself in the possession of a large number of horses and no plows or harrows to which to hitch his teams. It would pay him to sell some of his horses and buy enough equipment to make the remaining horses productive.

A balanced nation. This principle of balancing up the factors of production is just as important for the nation as a whole as it is for the individual farmer or manufacturer. The country which possesses a surplus of land and a scarcity of labor will find that its land is very ineffectively used. What it needs is more labor. It cannot very well sell its land, but it will in all probability pursue a policy which will increase its labor supply. Labor under such conditions will be in great demand, and for the same reason that, in dietetics, protein will be in great demand if it is scarce while the other food elements are abundant.

In such a community land is certain to be cheap and labor dear. The high price of labor, the ease with which men can establish themselves on the land as independent farmers or get remunerative work, encourages early marriages and large families. This is especially true on the farms, where labor is scarce and land abundant. Every additional child is money in the farmer's pocket, because as soon as the child is old enough to work he helps to solve the ever-present problem of scarcity of labor. Immigration is also likely to be encouraged by such a country. And thus from two sources the labor supply is increased in response to the effort to balance up the factors of production.

But tools and equipment of all kinds, which are generally included under the word "capital," are almost, though not quite, as essential as either labor or land. If capital is scarce while one or both of the other factors are abundant, it will be in great demand, for the same reason that labor is in great demand where it is scarce and land is abundant, or that water is in great demand where there is an abundance of land with all the elements of chemical fertility, but a scarcity of water. An overpopulated country, on the other hand, finds itself with a badly balanced industrial system, but the balance is in this case disturbed in the opposite direction. Land being the scarce factor, every acre that can possibly be used is of the utmost importance. Labor, on the other hand, is cheap. It can easily be spared. If it sees fit to migrate to other countries, no great effort is made to prevent it, no high price being offered it as a reward for staying at home. Under such circumstances, to hold an acre of land out of use would seriously reduce the total production of the community.

Balanced capital. As on the farm or in the factory we saw that different kinds of tools have to be combined, so we should find that different kinds of capital, or tools, have to be combined in the nation at large. If, for any reason, the country should find an oversupply of one class of tools, say agricultural implements, and an undersupply of another class of tools, say

railroads and rolling stock, the productive power of the whole nation would be limited by the deficiency of transportation facilities. However much might be produced with the agricultural implements, if it could not be transported to market, it would be of little use. This would be a case of a badly balanced national capital. The result would be that the industrial system, if it were a good system, would find some way to restore the balance. It would be poor economy, under such circumstances, to increase the production of agricultural machinery. That would add very little to the total producing power of the nation. If something could be added to the transportation facilities, that would add considerably to the productive power of the nation. Under a well-organized industrial system the readjustment takes place automatically. Farm implements become cheap. Farmers do not care to buy any more, and the manufacturers are discouraged from production. Railroad building, however, is stimulated by the high earnings of the existing railroads; and the productive energy of the community is diverted from the manufacture of agricultural implements to the building of railroads and the manufacture of railroad equipment.

If we reverse the supposition of course we get the opposite results, but the same principles will be at work. If we should find an overabundance of railroad facilities and a scarcity of agricultural implements, then it would be to the interest of the country to have more agricultural implements. If the existing transportation facilities could easily carry all that the farms produce and more too, little would be added to the national product by building more railroads, and much could be added by manufacturing more farm equipment and increasing the growth of crops. The low earnings of railroads and the increased demand for farm machinery would tend to divert the productive power of the nation from railroad building to the manufacture of farm implements and the use of them on the farms.

This principle is of universal application, and thousands of illustrations could be multiplied if it were necessary. If we apply it to the railroads themselves, we find it working in the utmost detail. When a railway system does not have rolling stock enough to utilize its tracks its capital is badly balanced, and naturally the thing to do is to get more rolling stock and more freight, in order to utilize the trackage advantageously. In other cases the road may find itself with more rolling stock and more business than can be done effectively on its existing trackage. It must then begin adding to its trackage rather than to its rolling stock, in order to restore the balance.

The fundamental problem of scientific management. The fundamental problem of all management, whether it be that of a diet kitchen, a farmer's feeding lot, a farm as a whole, a factory, a railroad, or a nation, is the problem of balancing the factors of production. The problem of managing the nation is commonly called the problem of statesmanship, and the fundamental problem of all statesmanship is that of balancing the factors of national life. To have so much productive power as to tempt barbarians from the outside to invade and rob, and so little military defense as to be unable to repel barbaric invasions, is to invite national disaster. On the other hand, to maintain so large a fighting-machine as to interfere seriously with the work of production is also bad statesmanship, because it preserves a bad balance of the factors of national life and prosperity. To encourage immigration and the multiplication of numbers beyond the point necessary to utilize the land effectively also produces an unbalanced situation. To discourage immigration or the multiplication of numbers to such an extent as to leave the land inadequately utilized is equally bad.

A balanced population. The greatest danger of all, however, and the one which, apparently, is least appreciated by some of our statesmen, is that of producing a badly balanced population. At the beginning of this chapter the question of the

balancing of the hodcarriers and the brick and stone masons was mentioned. This may be taken as typical of the necessity of balancing skilled labor and unskilled labor. To have more unskilled labor than can be used effectively with the limited supply of skilled labor is quite as bad as to have more people than can be supported on the land or fewer people than are necessary to utilize the land. To have more manual labor than will combine effectively with mental labor, to have more mental laborers who are capable of doing only routine work than will combine effectively with those mental laborers who possess originality, inventiveness, and the power of leadership, is also to produce a bad balance.

Probably the most important of all problems of statesmanship, and at the same time one of the most difficult, is that of balancing the population so that no particular class of labor is either oversupplied or undersupplied with respect to any other class. One method of preserving the balance is by education and vocational guidance. Training men for the occupations where men are needed, as evidenced by the high wages and salaries paid, is one of the quickest and most effective ways of preserving the balance. Whenever any occupation is so undermanned as to make it difficult to find workers, wages or salaries will tend to rise. This increase in remuneration is then a standing invitation to young men to prepare themselves for that work, and a properly conducted educational system is a standing opportunity to young people to prepare themselves to accept the invitation.

Differential rates of multiplication. A wholesome moral life would also be a powerful agency working in the same direction. Those who have demonstrated that they are needed, by the fact that they can fill good positions for which there is a demand and for which high wages and salaries are offered, are the ones who ought to reproduce their kind most abundantly. Unfortunately, in most modern communities, they are the very people who multiply least rapidly. On the other hand, those who have demonstrated that they are more or less superfluous be-

cause they can do only a kind of work which is oversupplied, and who therefore find difficulty in getting work at all and can earn only low wages when they do get it, ought, from the standpoint of a balanced population, to multiply least rapidly. Unfortunately they are frequently the very people who multiply most rapidly. This differential rate of multiplication helps to perpetuate a badly balanced population in spite of all the efforts of the schools toward an occupational redistribution of population and a restoration of the balance.

Geographical redistribution of population. That more land is better for a growing population than less land is the theory according to which a great deal of the history of the world has been constructed. The migration of peoples in search of more land is one of the large aspects of human history. There could be no possible object in seeking more land, instead of remaining content with the land already in the possession of the people, were it not for the fact of diminishing returns. Therefore a very discriminating writer[1] has stated the opinion that the law of decreasing returns is the fundamental fact of human history. The effort of a growing population to acquire more land is, from the standpoint of the present chapter, merely an effort to restore the balance between factors of production. In any given state of civilization too dense a population (that is, too much labor and too little land) works to the disadvantage of the people. When they begin to perceive that they would be better off if they had more land, nothing except a strong military guard or a Chinese wall will prevent emigration.

Migration of capital. But capital follows the same law as population. In a community where the land and labor are not properly balanced with an adequate supply of capital, the perception of a need for more capital (that is, tools and equipment) is likely to be pretty clear and definite. This leads to the offer of high rates of interest as an inducement to capital to migrate from other communities where it is abundant in order

[1] Edward Van Dyke Robinson, "War and Economics," *Political Science Quarterly*, Vol. XV, pp. 581–622.

to supply those communities where it is scarce. The possibility of using each and every unit of capital advantageously is what enables borrowers to pay the high rate of interest. The scarcity of capital relatively to other factors is what creates the opportunity for advantageous use of capital. The formula "More capital, more product; less capital, less product" is appreciated with peculiar vividness. This appreciation leads to active bidding for capital, and this to the offer of high rates of interest. The fortunate individual who can gain possession of an additional fund of capital, being able to increase his product considerably, finds it economical to pay a high rate of interest for it. If he has capital of his own, whereas his competitors in production lack capital, he will have a great advantage over them and will, therefore, secure a large income. According to our analysis in Chapter XXXVIII, this additional income which he gets from the use of his own capital is interest as truly as the income which he gets from lending his capital to someone else.

COLLATERAL READING

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PART III. THE PRODUCTIVE INDUSTRIES

CHAPTER XVIII

THE EXTRACTIVE INDUSTRIES

Ways of acquiring wealth. In the diagram in the chapter on Economic Activities the ways of acquiring wealth are divided into two main classes, the uneconomical and the economical. It was also pointed out that from the social or national point of view it is uneconomical to have men acquiring wealth by methods which do not add to the total wealth or well-being of the society or the nation. The economical ways of getting a living were further subdivided into three classes: the primary industries, the secondary industries, and professional and personal service.

The primary industries. The primary industries are themselves subdivided into two classes, the extractive and the genetic. Extractive industries are those which merely appropriate natural objects without any attempt to replace what is taken or to keep up and increase the supply. The genetic industries, which might almost be called creative, are those primary industries which make a conscious effort to replace that which is taken and to increase the supply. Thus, hunting wild animals and grazing domesticated animals on free ranges are extractive, whereas tillage and stock-breeding are genetic. Lumbering or cutting timber in a natural forest is extractive, whereas forestry, the scientific growing of timber, is genetic. Mining is extractive. There does not seem to be any genetic industry which bears the same relation to it as fish culture bears to fishing, or forestry to lumbering.

Hunting. Of all industries hunting is the most primitive. It was sometimes combined with fishing as a means of subsistence. It usually included the search for edible fruits, nuts, and vege-

tables, as well as the killing of animals, and it sometimes even degenerated into a man hunt; that is, the hunting, killing, and robbing of men. Where animals constituted the most abundant source of food, primitive men quite naturally hunted animals. Where fruits, nuts, and edible roots were abundant it was not uncommon for the search for these foods to become the chief occupation. The hunting of animals led naturally to domestication and herding, and the search for fruits and herbs led quite as naturally to horticulture, as the next stage in industrial development. Our own primitive ancestors seem to have been hunters, and later herdsmen, before they took up agriculture. The North American Indians lived mainly by hunting animals, though they had taken to the cultivation of crops on a small scale. They seem not to have domesticated any animal except the dog, before the coming of the white man. This direct passage from hunting to tillage, without an intermediate stage of herding, is considered somewhat exceptional. The ancient Peruvians had domesticated the llama and the alpaca. The ancient Mexicans had become horticulturists apparently without having been herdsmen at all; their primitive hunting seems to have consisted mainly in searching for fruits and herbs rather than for animals.

Hunting, which includes trapping, has played an important part and still plays an appreciable part in our national economy. The abundance of game on our Western frontiers, when we had a frontier, was an important source of food for the advance army of settlers. The emigrants who crossed the Great Plains in the early settlement of the Pacific coast also benefited to a certain extent from the herds of buffalo, deer, elk, and antelope which at one time abounded. More important, however, was the regular business of trapping fur-bearing animals and of trading with the Indians for the skins and furs which they collected. A great deal of the history of our frontier, beginning with the first settlements on the Atlantic coast and continuing across the continent, has been a history of the fur trade. Relatively to her size and her other industries, the fur trade has been

even more important in Canada than in the United States. Great companies, such as the Hudson Bay Company and the Northwest Company of Merchants of Canada, were organized which, especially during the eighteenth and early nineteenth centuries, swayed the destinies of that country and parts of our own Northwest. They maintained numerous trading-posts and employed thousands of men, who explored every nook and corner of the territory over which they operated. Similar though smaller companies were formed within the United States to trade with our own Indians. Many of our Western pioneers, guides, and scouts, of whom Kit Carson was the most famous, began their careers as hunters and trappers for these various companies. The story of their adventures adds a romantic element to the early history of our Far West, but they were making their living by gathering furs to supply the demands of commerce.

After the building of the transcontinental railroads across the great Western plains a rich harvest of buffalo skins was reaped for a few brief years. The lamentable result was that the buffaloes, or bison (as they are more properly named), which had roamed in countless numbers over those plains, were almost exterminated in the two decades from 1870 to 1890. It is doubtful whether such a slaughter of noble animals had ever taken place before in the history of the world.

As the country has become settled, fur-bearing animals, as well as other wild animals whose skins form articles of commerce, have tended to grow scarcer, though no such wholesale destruction has overtaken any of the others (except the beaver) as that which overtook the buffalo. Most of them are small enough to find cover and sustenance for small numbers in the woods and fields of settled communities. Therefore hunting and trapping still supply a small fraction of our national income. The most valuable of all our inland fur-bearing animals, the beaver, has almost disappeared, along with the buffalo; but minks, muskrats, raccoons, opossums, skunks, foxes, and coyotes are still found in small numbers. The subarctic regions

of northern Canada and Alaska still yield considerable harvests of furs, while the seals which congregate in the Bering Sea, if adequately protected, may prove a valuable national asset.

Fishing. While hunting, as a source of national wealth, tends to decline in importance as the country develops, fishing seems to increase. One reason for the decline of hunting is the simple fact that land becomes too valuable for other purposes to be allowed to remain in its wild state as a refuge or feeding-ground for wild animals. When it is turned to other purposes most of these animals must of necessity disappear. The same is apparently true of many inland streams which once furnished small quantities of fish. But the larger lakes and, especially, the oceans furnish an almost inexhaustible quantity of excellent food. As population and the demand for food increase, the harvest of the sea assumes a more and more important part in our national economy. According to the last estimate of the Federal Census there were in the United States, including Alaska, 7347 vessels engaged in the fishing industry, 166,343 persons were employed, and the total value of the product was $75,029,973. The total value of the fisheries of the world is estimated at something over $480,000,000.

We have as yet scarcely begun to realize the possibilities of this harvest of the sea. Practically every fish which lives in these northern waters is good for food if properly prepared. Every decade we are discovering that some variety which has formerly been rejected is quite as good as any that we have hitherto prized. Thus far we have chosen only a few of the many varieties with which the sea abounds.

Pasturage. It would be impossible to estimate how much the civilized races of the north-temperate zone owe to such domestic animals as the horse, the ass, the cow, the sheep, the goat, and the pig. All these animals have, at one time or another, furnished food for man. The horse, the ox, and the ass have furnished that which has played almost as important a part as food in man's conquest of nature; namely, power. Before steam and electricity had been harnessed, or water power devel-

oped, these animals were almost the only source of power besides human muscles. The skins of all were and are still utilized, there being no very good substitute for leather even to this day. The cow and the goat have furnished and still furnish milk, one of our most important articles of diet. The wool of the sheep is even now, next to cotton, the most important material for the manufacture of clothing.

In their native state all these animals except the pig lived almost exclusively upon grass, either green or dried in the form of hay, and they still depend mainly upon it. Even the pig, with his omnivorous appetite and his accommodating stomach, will thrive on grass as his chief article of diet, though he needs some more concentrated food in addition if he is to make his best growth. Grass and grazing have therefore played a very important part in the economic life of that branch of the human race from which we are derived. Our ancestors were already herdsmen before they emerged from prehistoric darkness. All the animals now under domestication and all the fowls, except the turkey, were domesticated so long ago that we have no record as to where or when it occurred. It may give us a new respect for those prehistoric ancestors of ours when we reflect that we have never succeeded in thoroughly domesticating any animal since we have had a history, though we may soon succeed with the zebra. There has never been a period of which we have any record from the earliest times to the present when our branch of the human race did not depend for its subsistence largely upon the grazing animals. During the greater part of our historic life our domestic animals grazed on wild or native grasses. Feeding them upon cultivated grasses and grains will be discussed under Agriculture.

Grazing on our Western frontier. From the earliest settlements in the territory now occupied by the United States, grazing has been an important industry. Following closely in the wake of the hunters, trappers, and fur-traders and in advance of the farmers have gone the herdsmen. The wild grasses furnished a ready source of income to the man who possessed

animals capable of turning them into salable products. The frontier settlements of colonial New England possessed large herds of cattle, and down to 1820 beef was one of the principal exports. Hogs ran wild in the woods and, living as they did on roots and mast, furnished an abundant supply of meat. Horses were exported in considerable numbers. After the danger from wolves had been reduced, sheep were grown in large numbers. In Virginia and the Carolinas grazing developed even more rapidly. The cattlemen had their brands registered, they organized round-ups, and they carried on the business very much as it was carried on in the Far West in the seventies and eighties of the last century.

The herdsmen continued to move westward in advance of the more permanent settlements, but the farmers who plowed the land and harvested crops kept many animals to graze upon the native grasses which still flourished upon the unbroken lands. Before the building of the railroads great herds of cattle, sheep, and hogs were driven sometimes hundreds of miles to market in the cities of the Atlantic coast. A hog which could not transport itself to market was not of much value; consequently not much attention was given to the breeding of the short-legged, barrel-shaped hog of the present day. The cattle, likewise, were built more for traveling than for meat. The oxen of that period, which were preferred to horses for heavy farm work, were well adapted to that purpose.

When the advance waves of settlement reached the great prairies of the West the grazing industry entered a new phase. Those natural meadows of vast extent furnished a much more abundant pasturage than had the great forest which extended almost unbroken from the Atlantic coast to western Ohio in the central part of the country and to the Mississippi River and beyond on the north and south. Goats and asses had never figured largely among the domestic animals of this country, but horses, cattle, sheep, and hogs multiplied rapidly. On these Western prairies—the former home of countless herds of buffalo, deer, elk, and antelope, all of which were grazing ani-

mals—cattle and sheep were very economically produced and would have been enormously profitable had not the prices of beef, mutton, and wool fallen so low as barely to cover the low cost of production. Dwellers in Eastern cities enjoyed abnormally cheap meat and continued to do so until the very end of the nineteenth century; since that time meat prices have been gradually approaching a normal level again.

The Texas cattle trail. After the close of the Civil War the grazing industry entered still another phase. Vast herds of cattle, brought by the early Spanish settlers, had long roamed the plains of Mexico and Texas. After Texas entered the United States the grazing industry developed rapidly under the energetic management of American cattlemen. Texas cattle began to enter the markets of the North and East. The Civil War put a stop to this for a time. At the close of the war the Texas ranges were swarming with cattle. They soon began to move northward in search of more pasture as well as better markets. This drift northward followed, in the main, the western edge of the settlements; and the route came to be known as the Texas Cattle Trail. As settlements extended westward the trail necessarily moved westward also.

By this time the northern ranges were all west of the Mississippi River and were soon confined to the Great Plains. Farming on these plains was slow in development because of the insufficient rainfall. Therefore the tide of westward settlement was so retarded as to permit a considerable development of what came to be called cattle-ranching. The grazing industry was given more time in which to develop systematically. It was less transitory than it had been on the rapidly moving frontier of earlier times. It still survives over considerable areas of the arid West (that is, west of the one hundred and second meridian), though it is becoming more restricted through the gradual settlement of the better lands by farmers. Nearly half the beef cattle and more than half the sheep of the United States are grown on these ranges, though many of the animals raised there are afterwards fat-

tened in what is known as the Corn Belt; that is, the country in which Indian corn is the leading crop. This belt extends from Ohio westward beyond the Missouri River, roughly to the ninety-eighth meridian. Considerable numbers of horses also are grown on these ranges, but most of them are grown on the farms farther east. Goats also have increased on some of the southwestern ranges, though they have never played a very important rôle in our national economy.

Lumbering. Next to grass the most valuable natural product of the soil is timber. It might occupy first place if the value of the native timber standing at a given time were compared with the value of the native grass standing at the same time. The proper basis of comparison, however, is the annual growth of the two products on soil equally good for either. Though this is sometimes called the Age of Steel, wood is still an important and almost indispensable material.

The first settlers on our Atlantic seaboard found a dense and apparently limitless forest extending from the coast westward. It was not until well into the nineteenth century that the advance guard of the army of Western migration began to emerge from this forest onto the great prairies of the West. Timber was so abundant as scarcely to be considered an economic good. Certainly the settlers had little occasion to economize it. The best of it they used rather lavishly; the rest they destroyed in order that they might use the land for things which they needed more than they needed timber. Along the northern tier of states the great forest extended as far west as Minnesota. In the middle strip the prairies began in parts of northern Indiana. Farther south the forest followed the Ohio valley to the Mississippi and extended beyond through central and southern Missouri, Arkansas, and Louisiana into portions of eastern Kansas, Oklahoma, and Texas. Other forests were found in the high mountains of the West, but the finest of all were found in the region of Puget Sound in our extreme Northwest.

After the first onslaught of the settlers, who were bent on getting rid of the timber in order to clear the land for cultivation, lumbering became a regular business in every part of our forested area. Its greatest development was in lands which were not the most valuable for agricultural purposes. Along our northern border, where the climate was somewhat severe and where the soil was rather light and sandy, the timber was not destroyed in order to clear the land, because better lands were available farther south. When the timber of this northern strip came to have a commercial value this region became the scene of lumbering on a large scale. Large companies were formed, thousands of men were employed, and great fortunes were made. Lumbering in this region, particularly along the Great Lakes and the upper tributaries of the Mississippi River (that is, in the states of Michigan, Wisconsin, and Minnesota, where water transportation was cheap), developed rapidly during the latter half of the nineteenth century and then declined rapidly. A similar development took place in the Southern states. Here the greatest activity was along the southern coast, just outside of the Cotton Belt; that is, on land which was not cleared primarily for the purpose of growing cotton, but where the timber was left standing until it had acquired a commercial value through the increased demand and the improvement of transportation facilities. The most valuable timber tree of this belt was the yellow pine, as the white pine had been in the case of the northern belt.

Lumbering, however, has by no means been confined to these two belts. Much timber of various kinds and qualities is cut every year in every state in the Union, though naturally it is less in the prairie states than in those which were originally forested. In the older states some of the timberland has been cut over several times since the first settlement and will doubtless yield many harvests in the future. But the greater part of our original virgin forest has been destroyed. Such cut-over lands as are not suitable for other purposes or not needed im-

mediately for agriculture will undoubtedly be allowed to reforest themselves or be reforested by scientific methods, but it is safe to say that the days of cheap and abundant timber in this country are past. From this time forward careful conservation will be necessary in order to safeguard an adequate supply.

Mining. The greatest of all our extractive industries is mining. Within the boundaries of the United States are found a wealth and variety of minerals such as no other country is known to possess, though no one knows what new discoveries may yet be made in this and other lands.

Notable among our mineral products are the following. The values given are for the year 1915.

Coal	Bituminous	$502,037,688
	Anthracite	184,653,498
Iron	Ore	101,288,984
	Pig	401,409,604
Copper		242,902,000
Petroleum		179,462,890
Natural gas		101,312,381
Gold		101,035,700

Silver, lead, zinc, aluminum, cement, building-stone, lime, and salt are also valuable products, besides many others of less value. Our total mineral production for the year 1915 aggregated more than two and a third billions of dollars.

Since minerals are not reproduced or replaced when once extracted from the earth, it is only a question of time before all of our rich deposits will be exhausted. In some cases the deposits are so enormous as to remove the time of their exhaustion so far into the future that it is difficult for us to realize that it is coming. Authorities agree that our coal deposits will last for many hundreds of years, some say many thousands of years. A thousand years seems a long time to an individual, but it is not so very long in the life of a nation. If, however, we have enough coal to last, let us say, for only a thousand years, it is a difficult question to decide to what extent that should give us concern for the future welfare of our country. It is easy to

laugh and to say that it need not concern us, for we shall not be here to suffer inconvenience. It is also easy to become too much alarmed, for with the progress of invention we may find other sources of heat and power before our coal is gone. Probably our best policy is merely to avoid unreasonable waste or destruction of mineral resources and then leave future generations to work out their own problems. Wisdom will not die with us of the present generation.

Instability of the extractive industries. All our extractive industries have not only added greatly to our material wealth; they have likewise given rise to picturesque but somewhat unstable phases of our social life. The early hunters and trappers were a hardy, adventurous race, whose deeds and prowess have become a part of our national history. Our herdsmen likewise, especially those who developed the cattle business on the Great Plains, supplied an element of romance and adventure which still appeals to the imagination of our people. Our hardy fishermen and whalers have given splendid examples of the courage and strenuousness which can wrest a living from the unconquerable ocean. Our lumber-camps and our mining-camps have attracted adventurous and unstable characters from the ends of the earth and furnished much excellent material for the story-writers. But instability is a characteristic of these industries and, consequently, of the life which grew up around them. Stability can be supplied to our national life only by industries which are themselves self-perpetuating. The genetic industries must supply that need.

CHAPTER XIX

THE GENETIC INDUSTRIES

What are the genetic industries? By the genetic industries are meant those in which men make conscious and systematic efforts to direct the biological processes of reproduction so as to increase the supply of desirable plants and animals. The greatest of these is agriculture, which includes both the cultivation of plants and the breeding of animals. Forestry and fish culture are also included under the head of genetic industries. Agriculture, however, is sometimes carried on in such a slipshod manner as scarcely to deserve to be classed as a genetic industry. When farmers make no effort to preserve the fertility of their soil, but exhaust it by wasteful methods of tillage and by reckless overcropping and then move on to new and unexhausted areas, their business is sometimes called mining the soil. A genuinely genetic type of agriculture can endure and even improve for indefinite periods of time on the same soil; that is, it not only preserves but improves the fertility of the soil, generation after generation, for hundreds and thousands of years. It thus makes possible a stable, an enduring, and an expanding civilization such as could not be supported exclusively by any of the extractive industries.

Demand of all outdoor industries for space. All those industries which appropriate or increase the products of the soil, such as hunting, grazing, lumbering, forestry, and farming, have one characteristic in common. They all require a great deal of space as compared with mining and the secondary industries, such as manufacturing and merchandising. So great is this demand for space on the part of those industries which gather in or develop the products of the soil that those who engage in them must of necessity spread themselves over wide areas in proportion to their population. They are compelled by

the nature of their industries to live in scattered homes or in small villages located far apart. They are therefore called "rural" (that is, "field" or "open-space" industries), and those who engage in them are called "rural," "field," and "open-space" people. Living so far apart, with plenty of room, in close contact with nature but in slight contact with other men because of the distances between them, produces a profound reaction upon their lives and characters. Perhaps it would be more accurate to say that those who engage in the indoor industries are so cramped for space and have so few contacts with nature and so many contacts with one another that a profound and artificial change is produced in their lives. By the indoor industries are meant all those which, in contrast to the field industries, require so little space that they can be walled in and roofed over. It is sometimes difficult for indoor and outdoor people to understand one another.

We have seen in the last chapter that the utilization of the soil, not only on our own frontier but also in the development of civilized life among our remote ancestors, passed through several distinct stages, such as the hunting stage, the grazing stage, and the agricultural stage. These are progressive stages in the economizing of space. It takes a great deal more territory to support a given population by hunting than by grazing, and by grazing than by agriculture. When game grew scarce or when population increased, those who had the wisdom to make the change were forced into grazing, and again into tillage, in order to increase their means of subsistence. What an uneconomical use of land hunting was may be inferred from the fact that, according to the best authorities, there never were more than one million Indians within the boundaries of the present United States. This territory now supports approximately a hundred times that number of people and supports them more comfortably than the Indians were supported. Each Indian tribe was forced to guard its hunting-grounds lest they be invaded by hunters from other tribes and the source of its subsistence be cut off.

Tillage. Tillage consists essentially of three processes: first, preparing a good seed bed, in which plants can grow more vigorously than in natural, or unprepared, soil; second, planting in this prepared seed bed the seeds of such plants as are deemed most useful or desirable; and, third, destroying all other plants, commonly called weeds, which may start to grow in competition with the plants whose seeds have been planted.

Scientific agriculture. While tillage consists essentially of these three processes, scientific agriculture includes many things besides. We need to be on our guard, however, against a pedantic use of the word "scientific" as applied to agriculture. Scientific agriculture is nothing more nor less than the most economical and effective use of all the factors of agricultural production. Specifically it consists mainly, though not exclusively, in economizing, first, the plant food in the soil; second, space; third, labor; and, fourth, capital (or equipment). Economizing plant food means getting as large a product as possible without depleting the supply of plant food. Economizing space means getting as large a product as possible from a given area; that is, as large a product per acre as possible. Economizing labor means getting as large a product per unit of labor, or per man, as possible. Economizing capital (or equipment) means getting as large a product per unit of capital (or equipment) as possible.

Excessive economy of any one of these factors always involves a certain amount of waste with respect to some of the others. For example, it is quite possible to economize space to such an extent as to exhaust plant food, and vice versa. That is to say, a farmer may try for a period of years to get so much from each acre as eventually to deplete the fertility of his soil. By a judicious rotation of crops and the keeping of live stock he may preserve the fertility of his soil for indefinite periods, but this may not give him the maximum product per acre in the present period. If there is one crop that yields better than any other a shortsighted farmer is tempted to grow that single crop, since it would give him a larger product per

acre, but such continuous cropping tends to exhaust his soil. Rotating tends to preserve the fertility of the soil, but gives less per acre in the present; this frequently means growing some crops which are not so profitable in the immediate present as is the main crop.

The law of diminishing returns. A similar conflict arises between the economy of space and the economy of labor. It is possible to try to grow so much per acre as to reduce the product per man, or per unit of labor. It is this phase of the question of economy that is commonly known as the law of diminishing returns from land. This law is simply that after a certain amount of labor with the appropriate tools has been applied to the cultivation of a given crop on a given piece of land further applications of labor do not yield proportional returns. They may increase the crop slightly, thus increasing the yield per acre, but they will not increase the crop in proportion as the labor is increased. The result is a decrease in proportion to the number of units of labor.[1]

This principle may be illustrated by means of the following table, which purports to show how much corn, in a hypothetical case, could be produced upon a ten-acre field by using different quantities of labor and tools, the quantities being expressed in terms of days' labor of a man and team with appropriate tools. The ratio between the product and the labor is shown in the third column, which states the number of bushels produced per day's labor.

On a field such as we have assumed, it would be possible, by using fifty days' labor, to get sixty-five bushels per acre, which would be more economical of space than to put twenty-five days on it and get only forty-five bushels per acre. It would be less economical of labor, however, since by using only twenty-five days' labor the farmer gets eighteen bushels for each day, whereas he gets only thirteen bushels for each day when he applies fifty days' labor to its cultivation. Just how to balance

[1] See the author's chapter on Diminishing Returns, in his volume, "The Distribution of Wealth." The Macmillan Company, New York, 1914.

the two factors, land and labor, so as to get the best results from both is a very nice problem in farm management. If labor is cheap and land is dear it is more important to economize space than labor, but if labor is dear and land is cheap the opposite is better.

Day's Labor of a Man and Team with Appropriate Tools	Total Yield in Bushels	Bushels per Day's Labor		Bushels per Acre
1	0	0		0
5	50	10	Increasing returns	5
10	150	15		15
15	270	18		27
20	380	19		38
25	450	18	Diminishing returns	45
30	510	17		51
35	560	16		56
40	600	15		60
45	630	14		63
50	650	13		65

The great law of productivity. This law of diminishing returns has been called the great law of agricultural production. It is a part of a wider law, which may be called the law of variable proportions, which is the fundamental law of all production. This larger law will be discussed in a later chapter devoted to that subject.[1] For the present it is sufficient to point out that it presents the problem of balancing the different factors which have to be combined in production. It is much the same problem at bottom, whether it be the balancing of the different elements of plant food in fertilizers or of the different elements of animal food in the feeding of cattle, the balancing of such factors as labor, land, and capital in running a farm or a factory or the balancing of the different kinds of people that make up a nation.

The largest industry. Agriculture is not merely one of the basic, or primary, industries; it is the most important of all industries if we consider the world at large or any large section of

[1] See Chapter XXXIII.

it which is compelled to live within itself. Considerable sections of country and considerable masses of population may live primarily by the indoor industries, sending out their surplus produce to distant lands and bringing back in exchange the products of the soil. Thus a country like England or considerable portions of our own country, such as southern New England, may become largely urbanized; that is to say, the greater portion of the people may engage in indoor rather than in outdoor industries. But they live by selling the products of their indoor industries to people far beyond their own boundaries and bringing in from the ends of the earth the products of the soil. The United States as a whole is tending to become an urbanized nation; that is, it is tending toward a condition where more than half of its people will work indoors rather than outdoors. Again, there is a tendency in the world at large for the indoor industries to gain somewhat in importance as compared with the outdoor industries, though it is unlikely that the former will ever actually overtake the latter.

Why agriculture is losing ground. As civilization advances, people tend to demand finer and finer products for consumption. Usually, though not in every case, producing a finer product means doing more work in the finer, or finishing, stages. It takes no more wool or cotton, and therefore no more agricultural labor, to make fine than coarse clothing. The difference is mainly in the amount of work which is put upon the material after it leaves the farm. In other words, of the total work put upon material for fine clothes a smaller proportion is outdoor labor than for coarse clothes, and a larger proportion is indoor labor. The same principle applies to shoes, furniture, vehicles, and many articles of food. Throughout the whole civilized world this increase in the proportion of labor performed indoors as compared with that performed outdoors tends to increase the city population more rapidly than the rural population.

Another and more important fact is the increased use of agricultural machinery. Fewer men are now needed in the

actual cultivation of the land, as some of the work is done in the factories where farm machinery is made. Whereas all the men who formerly helped in the harvesting of a wheat crop worked in the fields, now some of them work in the shops and factories making harvesting machinery, and only a part of the total number actually work in the fields. The same change has taken place with respect to many other kinds of farm work.

Influence of occupation on character. Of all the leading occupations in civilized countries, there is only one in which success depends primarily upon the ability to deal efficiently with nature and natural forces; that is, farming. In most of the others success depends quite as much on ability to deal with other men as on ability to deal with nature. Those whose success depends primarily upon ability to deal with other men—whether it be to please, persuade, or amuse them or to wheedle the money out of their pocketbooks—must necessarily become expert in those arts of expression and deportment which are pleasing to other men. Those, on the other hand, whose success depends primarily upon their ability to deal with nature must become equally expert in the art of dealing with nature; that is, in handling materials and directing natural forces. It is not surprising, therefore, that these two classes of experts, having so little in common, should sometimes fail to understand and appreciate one another. A farmer, particularly the old-fashioned, self-sufficing farmer, who had few points of contact with other men but many points of contact with nature, would naturally acquire less of what are sometimes called the social graces, less adroitness in the amenities of polite society, less expertness in indoor etiquette, than one whose business or professional success depended upon these forms of skill. They who get their living out of the soil must know the soil, the weather, the times and seasons, and everything that will affect their success, whereas they who get their living by dealing with other men must know the ways of men.

Commercial agriculture. The characteristics which farmers of an earlier day developed naturally and almost of neces-

sity are becoming less prominent as the nature of agriculture changes. Self-sufficing agriculture has become a thing of the past, and we are developing what may be called commercial agriculture; that is, a system in which the farmer is a buyer and seller, a dealer with other men, to almost the same extent as a city business man. He must now understand not only markets but political and social conditions, even those delicate psychological factors upon which successful buying and selling depend. This is tending to wipe out whatever distinctions formerly existed between the dwellers in the city and the dwellers in the country.

The independence and dependence of the farmer. We are hearing constantly reiterated, especially by advocates of the back-to-the-land movement, that the farmer is the most independent person in the world. The farmer himself does not always see it that way. Probably no one is so dependent upon outward physical conditions as the farmer. He must continually watch the weather and guard against pests of all sorts, animal diseases, predatory animals, and even town marauders. Every year lightning, hail, wind, and floods destroy crops in some part of the country. When the farmer thinks of all his troubles he is very likely to long for the comparative safety and independence of the indoor worker. On the other hand, the indoor worker is constantly harassed by troubles of human origin—political elections, commercial crises, changes of fashion, the organization of predatory trusts and monopolies, labor troubles, and the type of advertiser who levies something akin to blackmail. When he thinks of all his troubles he is very likely to long for the comparative safety and independence of the farmer.

One important characteristic of agricultural industry is its dependence upon the seasons. The indoor worker is frequently able to continue uninterruptedly in one kind of work, week after week, month after month, and year after year. From the very nature of the case this is impossible in agriculture, for every crop has its growing-season and its time of harvest. On every farm, almost every hour of the day has its own special

work to be done, so that the work is continually changing, not simply from season to season, from month to month, and from week to week but even from hour to hour. This makes agriculture almost of necessity an industry of small units. In an indoor industry, where a man can be kept at the same job continuously, mechanical or automatic administrative methods and devices may be installed so as to simplify the work of superintendence. It is possible, therefore, for a man of very moderate intellect and power to run an establishment employing thousands of men. To run ten men efficiently on a farm, where each man must be assigned a new job frequently on a moment's notice, where the whole work of the farm must be reorganized to meet a situation brought about by the change in the weather or in the conditions of some growing crop, requires as great mental ability as to run an indoor establishment employing hundreds of men. To run a farm employing one hundred men and run it efficiently would require the ability of a great military commander, a merchant prince, a captain of industry, or a university president. Very few farming establishments which employ as many as one hundred men have ever succeeded or can succeed.

Country people generally self-employed. Perhaps the most important fact concerning agriculture is that a very large proportion of those engaged in it are self-employed, whereas the vast majority of those who live in cities are employed by other people. The fact that farming is an industry of small units, while indoor industries are generally industries of large units, produces this difference.

Some of the deepest students of political and social tendencies have come to doubt whether democracy can ever develop to a high stage of efficiency except among people who are in the main self-employed. It is true that modern democracy arose first in the cities and towns, but it is likewise true that at that time the cities and towns were the homes of self-employed men. Before the rise of the factory system such manufacturing as was done was carried on in small shops by craftsmen who were

in the majority of cases self-employed. The rural districts, however, were under the feudal system. Conditions are exactly reversed at the present time. Under the factory system the great majority of people in the indoor industries work under bosses. Since the break-up of the feudal system and the rise of the one-family farm, which is the characteristic farm in the United States, the average dweller in the country is his own boss. This may have something to do with the fact that city politics are run by bosses and country politics are not.

According to the census of 1850 there was one farm in this country for every fourteen persons living under rural conditions; that is, outside of cities of eight thousand inhabitants or more. According to the census of 1900 there was one farm for every nine persons in rural residence. This shows that up to 1900, at any rate, the tendency was toward a larger number of independently operated farms in proportion to the rural population. Again, in 1900 there was one farm of fifty acres or more for every 13.4 rural dwellers. When we consider that towns and villages of eight thousand or less contain a fair proportion of those 13.4 people, we shall see that in the open country itself there are very few people engaged in work on each farm. They are nearly all what are called one-family farms; that is, farms operated mainly by the labor power of one family.

Interdependence of the sexes. The division of labor between the sexes is much more marked, of course, in agriculture than in indoor industries. There are so many operations on every farm which require the superior muscularity of the male as practically to shut women out. At the same time, the fact that the farms are so far apart makes it impossible for these muscular males to get along without women to run their houses. The men cannot live in boarding houses, because that would make it necessary to live too far from their work. Practically every farmer has to have a wife to do the indoor work. This may not be the highest motive for marrying, but still it does encourage the marriage habit. Consequently one finds in our rural districts fewer old, unmarried males than one finds infesting our

cities and towns. Moreover, there are comparatively few opportunities for a woman to make an independent living in the country, so that she is almost under compulsion to marry or else to move to town, where she can get remunerative employment.

Forestry. Forestry as distinct from lumbering has only recently received attention in this country. The United States Timber-Culture Act of 1873 was designed to encourage tree-planting by granting not more than one hundred and sixty acres of the public land free of cost to anyone who would plant a part of it to timber trees. At first it was required that one fourth of the land be so planted, but the requirement was soon changed to one sixteenth. The purpose was obviously to encourage the partial forestation of the Western prairies, but what nature herself had never been able to accomplish was not accomplished by act of Congress. As one rides over the Western plains one occasionally sees small tracts of straggling trees fighting for an existence on land which is too dry for them. These are the results of that act of Congress. Possibly if the act had been passed earlier—while there was public land left in the humid belt—something might have been accomplished, but even this is doubtful. Prairie land which will grow trees is generally more valuable for other purposes. Even if a settler had, on such land, made trees grow successfully he would probably have found it advantageous to cut them down in order to devote the land to some more valuable purpose.

Forestry economical on waste land. Forestry, in order to be an economic success, must obviously be practiced on land which would produce a greater value at lower cost when planted to trees than when planted to anything else. Mountainous and semimountainous lands, stony or swampy lands, and those which for other reasons are unsuited to tillage or pasturage furnish the natural opportunity for the practice of forestry on a large scale. While the annual product in the form of the annual timber growth is small, the cost is likewise small. Since the land would otherwise go to waste altogether, it is better to get even a small product than none at all.

Scientific forestry. In recent years the Federal government and several of the states have created forest reserves. Scientific forestry is being practiced, but it must be remembered that scientific forestry in this country is necessarily different from what it is in old countries. In a country where lumber is still cheap as compared with other lands, though dear as compared with what it once was, and where labor is dear, as it is in the United States, one cannot do in the name of science what one can do in an old country, where lumber is dear and labor cheap. A serious problem for the American forester is to keep costs down; unless he does this he may find that the timber is not worth what it costs to grow it. For this reason it is not the custom in this country to do much planting of trees or preparation of the ground. The work is mainly confined, first, to cutting out undesirable growths in order to give the more durable growths, which are in the main self-seeded, a chance to grow; and, second, and more important still, to guard against forest fires. Our summers, which are dry compared with those of Europe, make the forest fire the great enemy of the American forester. The fight against diseases and pests is a third task.

Fish culture. Fish culture has been fostered by the Federal and state governments of the United States and by various private agencies. Spawn is collected and hatched, and millions of young fish are distributed in our streams and along our seacoasts. A great deal of study is being given to the habits of various edible fishes and to the sources of their food. Private enterprise also is active in stocking streams and small bodies of water and in growing fish of various kinds for the market.

With our Great Lakes on the north, the ocean on the east and the west, and the Gulf of Mexico on the south, and with all our noble rivers, we have access to such vast and seemingly inexhaustible supplies of fish that fish culture in a strict sense has not developed very far among us. Hatching and distributing spawn and leaving the spawn to shift for itself and take its chances along with other wild fish is a step in the right direction, but it stops far short of the work of the animal-breeders on our farms.

CHAPTER XX

THE MANUFACTURING INDUSTRIES

Various types of manufacturing establishments. When we think of a manufacturing industry nowadays, we are very likely to form a mental picture of a huge building or group of buildings dominated by a tall chimney and filled with roaring machinery and busy men and women. Such is, indeed, the typical factory, though much manufacturing is still done in small shops where a few men work with small and comparatively simple tools. In the large factory the tools and the raw material, as well as the buildings, engines, etc., are usually owned by one man or group of men, while the work is done by another group. In smaller establishments various combinations are found. One kind of manufacturing establishment which is still numerous and widely distributed is the small shop where the worker owns his own tools and equipment, buys his own raw materials, and sells the finished product. It does not constitute much of a change, certainly not a revolution, when he hires a few helpers or apprentices to assist him. They work with his tools upon his raw materials, and they receive their compensation in the form of wages instead of in the form of a share of the profits of the business. Even where the owner ceases to do any of the work except to keep the accounts, buy the raw materials and sell the products, and exercise general supervision and management, the transition may have been so gradual as to attract no one's attention. By this gradual change, however, a type of manufactory may be developed which is very different from that with which it started.

But the transition is not always made in this way. Other methods of organization have existed at various times and still exist. In one class of shops the worker owns his own tools and

runs his own shop, but does not own the raw materials upon which he works. These are furnished by an outside person who supplies them and owns the finished product, paying the worker a price agreed upon for the work which he does. In this case also the worker may hire a few helpers or apprentices.

Still another method is found where the worker owns neither the materials upon which, nor the tools with which, he works. A third person supplies both materials and tools,—everything, in fact, except the place in which the work is done, which place the laborer himself supplies.

In the modern factory, however, everything is assembled in one building or group of buildings, around one power plant; everything is owned by one group of individuals, and the laborer furnishes nothing except his own skill and strength. The great advantage of this system is its economical use of power. Wherever a large use of power is necessary it is important that it be effectively and economically utilized. In all such cases the modern factory tends to displace all other methods of manufacturing. Where comparatively little power is required, and where, therefore, it is not of such great importance that it be economized, other methods still survive. In some cases, however, the competition of the factory is so severe as to force the workers in the small shops to work for very low wages. Where the main factor in success is the skill of the worker rather than cheap power, the small shop will probably continue to compete successfully with the factory. There has been a general tendency, however, for the large factory to grow, and the small shop to decline, in importance.

Progress toward large-scale production. The stages of this development from the small shop to the factory are by no means clear. Almost every form of manufacturing will be found in every stage of economic development. The large factory has come to be the dominant form only since the invention of power-driven machinery. The Industrial Revolution, as it is called, was the rather sudden growth of the factory to this dominant position during the latter half of the eighteenth century.

Power-driven machinery and large-scale production. A remarkable series of inventions followed one another in rapid succession and transformed several of the large industries of England into factory industries. These changes put England definitely in the lead as a manufacturing nation. The same revolution came in other countries a little later. Says Marshall[1]:

The quarter of a century beginning with 1760 saw improvements follow one another in manufacture even more rapidly than in agriculture. During that period the transport of heavy goods was cheapened by Brindley's canals, the production of power by Watt's steam engine, and that of iron by Cort's processes of puddling and rolling and by Roebuck's method of smelting it by coal in lieu of the charcoal that had become scarce; Hargreaves, Crompton, Arkwright, Cartwright, and others invented, or at least made economically serviceable, the spinning jenny, the mule, the carding machine, and the power loom; Wedgwood gave a great impetus to the pottery trade, that was already growing rapidly; and there were important inventions in printing from cylinders, in bleaching by chemical agents, and in other processes. A cotton factory was for the first time driven directly by steam power in 1785, the last year of the period. The beginning of the nineteenth century saw steamships and steam printing presses, and the use of gas for lighting towns. Railway locomotives, telegraphy, and photography came a little later. Our own age has seen numberless improvements and new economies in production, prominent among which are those relating to the production of steel, the telephone, the electric light, and the gas engine; and the social changes arising from material progress are in some respects more rapid than ever. But the groundwork of the changes was chiefly laid in the inventions of the years 1760 to 1785.

The inventions which preceded the cotton factory. A more detailed account of a most remarkable series of inventions which revolutionized the cotton industry is given in Walpole's "History of England from 1815."[2] This vivid description may be taken as typical of what took place in other industries.

[1] Alfred Marshall, Principles of Economics (fourth edition), p. 42. London, 1898.

[2] Quoted from Bullock, Selected Readings in Economics, pp. 128–143. Ginn and Company, Boston, 1907.

In the middle of the eighteenth century, then, a piece of cotton cloth, in the true sense of the term, had never been in England. The so-called cotton goods were all made in the cottages of the weavers. The yarn was carded by hand; it was spun by hand; it was worked into cloth by a hand loom. The weaver was usually the head of the family; his wife and unmarried daughters spun the yarn for him. Spinning was the ordinary occupation of every girl, and the distaff was, for countless centuries, the ordinary occupation of every woman. The occupation was so universal that the distaff was occasionally used as a synonym for "woman." "Le royaume de France ne tombe point en *quenouille*." . . . To this day every unmarried girl is commonly described as a spinster.

The operation of weaving was, however, much more rapid than that of spinning. The weaver consumed more weft than his own family could supply him with; and the weavers generally experienced the greatest difficulty in obtaining sufficient yarn.

THE FLY SHUTTLE

About the middle of the eighteenth century the ingenuity of two persons, a father and a son, made this difference more apparent. The shuttle had originally been thrown by the hand from one end of the loom to the other. John Kay, a native of Bury, by his invention of the fly shuttle, saved the weaver from this labor. . . . By means of these inventions the productive power of each weaver was doubled. Each weaver was easily able to perform the amount of work which had previously required two men to do, and the spinsters found themselves more hopelessly distanced than ever in their efforts to supply the weavers with weft. . . .

HARGREAVES'S SPINNING JENNY

The trade was in this humble and primitive state when a series of extraordinary and unparalleled inventions revolutionized the conditions under which cotton had been hitherto prepared. A little more than a century ago (1764–1767) James Hargreaves, a poor weaver in the neighborhood of Blackburn, was returning home from a long walk, in which he had been purchasing a further supply of yarn for his loom. As he entered his cottage his wife, Jenny, accidentally

upset the spindle which she was using. Hargreaves noticed that the spindles, which were now thrown into an upright position, continued to revolve, and that the thread was still spinning in his wife's hand. The idea immediately occurred to him that it would be possible to connect a considerable number of upright spindles with one wheel, and thus multiply the productive power of each spinster. He contrived a frame in one part of which he placed eight rovings in a row and in another part a row of eight spindles. . . . His ignorant neighbors hastily concluded that a machine which enabled one spinster to do the work of eight would throw multitudes of persons out of employment. A mob broke into his house and destroyed his machine. Hargreaves himself had to retire to Nottingham, where, with the friendly assistance of another person, he was able to take out a patent for the spinning jenny, as the machine, in compliment to his industrious wife, was called.

ARKWRIGHT'S WATER FRAME

The invention of the spinning jenny gave a new impulse to the cotton manufacture. But the invention of the spinning jenny, if it had been accompanied by no other improvements, would not have allowed any purely cotton goods to be manufactured in England. The yarn spun by the jenny, like that which had previously been spun by hand, was neither fine enough nor hard enough to be employed as warp, and linen or woolen threads had consequently to be used for this purpose. In the very year, however (1769), in which Hargreaves moved from Blackburn to Nottingham, Richard Arkwright took out a patent for his still more celebrated machine. . . . The principle of Arkwright's great invention is very simple. He passed the thread over two pairs of rollers, one of which was made to revolve much more rapidly than the other. The thread, after passing over the pair revolving slowly, was drawn into the requisite tenuity by the rollers revolving at a higher rapidity. By this simple but memorable invention Arkwright succeeded in producing thread capable of employment as warp. From the circumstance that the mill at which his machinery was first erected was driven by water power, the machine received the somewhat inappropriate name of the water frame; the thread spun by it was usually called the water twist.

PAUL'S CARDING MACHINE

The invention of the fly shuttle by John Kay had enabled the weavers to consume more cotton than the spinsters had been able to provide; the invention of the spinning jenny and the water frame would have been useless if the old system of hand carding had not been superseded by a more efficient and more rapid process. Just as Arkwright applied rotatory motion to spinning, so Lewis Paul introduced revolving cylinders for carding cotton. Paul's machine consisted of "a horizontal cylinder, covered in its whole circumference with parallel rows of cards with intervening spaces, and turned by a handle. Under the cylinder was a concave frame lined internally with cards exactly fitting the lower half of the cylinder, so that when the handle was turned the cards of the cylinder and of the concave frame worked against each other and carded the wool." "The cardings were of course only of the length of the cylinder, but an ingenious apparatus was attached for making them into a perpetual carding. Each length was placed on a flat, broad riband, which was extended between two short cylinders, and which wound upon one cylinder as it unwound from the other."

CROMPTON'S MULE

This extraordinary series of inventions placed an almost unlimited supply of yarn at the disposal of the weaver. But the machinery, which had been thus introduced, was still incapable of providing yarn fit for the finer qualities of cotton cloth. "The water frame spun twist for warps, but it could not be advantageously used for the finer qualities, as thread of great tenuity has not strength to bear the pull of the rollers when winding itself on the bobbin." This defect, however, was removed by the ingenuity of Samuel Crompton, a young weaver residing near Bolton. Crompton succeeded (1774–1779) in combining in one machine the various excellences of "Arkwright's water frame and Hargreaves's jenny." Like the former, his machine, which from its nature is happily called the mule, "has a system of rollers to reduce the roving; and, like the latter, it has spindles without bobbins to give the twist, and the thread is stretched and spun at the same time by the spindles after the rollers have ceased to give out the rove."

Before Crompton's time it was thought impossible to spin eighty hanks to the pound; the mule has spun three hundred and fifty hanks to the pound! The natives of India could spin a pound of cotton into a thread one hundred and nineteen miles long; the English succeeded in spinning the same thread to a length of one hundred and sixty miles. Yarn of the finest quality was at once at the disposal of the weaver, and an opportunity was afforded for the production of an indefinite quantity of cotton yarn. But the great inventions which have thus been enumerated would not of themselves have been sufficient to establish the cotton manufacture on its present basis. The ingenuity of Hargreaves, Arkwright, and Crompton had been exercised to provide the weaver with yarn. Their inventions had provided him with more yarn than he could by any possibility use. The spinster had beaten the weaver just as the weaver had previously beaten the spinster, and the manufacture of cotton seemed likely to stand still because yarn could not be woven more rapidly than an expert workman with Kay's improved fly shuttle could weave it.

CARTWRIGHT'S POWER LOOM

Such a result was actually contemplated by some of the leading manufacturers, and such a result might possibly have temporarily occurred if it had not been averted by the ingenuity of a Kentish clergyman. Edmund Cartwright, a clergyman residing in Kent, happened to be staying at Matlock in the summer of 1784, and to be thrown into the company of some Manchester gentlemen. The conversation turned on Arkwright's machinery, and "one of the company observed that as soon as Arkwright's patent expired so many mills would be erected and so much cotton spun that hands would never be found to weave it." Cartwright replied "that Arkwright must then set his wits to work to invent a weaving mill." The Manchester gentlemen, however, unanimously agreed that the thing was impracticable. Cartwright "controverted the impracticability by remarking that there had been exhibited an automaton figure which played at chess." It could not be "more difficult to construct a machine that shall weave than one which shall make all the variety

of moves which are required in that complicated game. Within three years he had himself proved that the invention was practicable by producing the power loom. Subsequent inventors improved the idea which Cartwright had originated, and within fifty years from the date of his memorable visit to Matlock there were not less than one hundred thousand power looms at work in Great Britain alone. . . .

Such are the leading inventions which made Great Britain in less than a century the wealthiest country in the world. . . .

THE STEAM ENGINE OF NEWCOMEN AND WATT

Steam was actually used early in the eighteenth century as a motive power for pumping water from mines; and Newcomen, a blacksmith in Dartmouth, invented a tolerably efficient steam engine. It was not, however, till 1769, that James Watt, a native of Greenock and a mathematical-instrument maker in Glasgow, obtained his first patent for "methods of lessening the consumption of steam, and consequently of fuel, in fire engines." James Watt was born in 1736. His father was a magistrate, and had the good sense to encourage the good turn for mechanics which his son displayed at a very early age. At the age of nineteen Watt was placed with a mathematical-instrument maker in London, but feeble health, which had interfered with his studies as a boy, prevented him from pursuing his avocations in England. Watt returned to his native country. The Glasgow body of Arts and Trades, however, refused to allow him to exercise his calling within the limits of their jurisdiction; and had it not been for the University of Glasgow, which befriended him in his difficulty and appointed him their mathematical-instrument maker, the career of one of the greatest geniuses whom Great Britain has produced would have been stunted at its outset.

There happened to be in the university a model of Newcomen's engine. It happened, too, that the model was defectively constructed. Watt, in the ordinary course of his business, was asked to remedy its defects, and he soon succeeded in doing so. But his examination of the model convinced him of serious faults in the original. Newcomen had injected cold water into the cylinder in order to condense the steam and thus obtain a necessary vacuum for the piston to work in. Watt discovered that three fourths of the fuel which the engine consumed was required to reheat the cylinder. "It occurred

to him that, if the condensation could be performed in a separate vessel, communicating with the cylinder, the latter could be kept hot, while the former was cooled, and the vapor arising from the injected water could also be prevented from impairing the vacuum. The communication could easily be effected by a tube, and the water could be pumped out. This is the first and the grand invention by which he at once saved three fourths of the fuel and increased the power one fourth, thus making every pound of coal produce five times the force formerly obtained from it." But Watt was not satisfied with this single improvement. He introduced steam above as well as below the piston, and thus again increased the power of the machine. He discovered the principle of parallel motion, and thus made the piston move in a straight line. He regulated the supply of water to the boiler by means of "floats," the supply of steam to the cylinder by the application of "the governor," and, by the addition of all these discoveries, "satisfied himself that he had almost created a new engine of incalculable power, universal application, and inestimable value." . . .

The steam engine, indeed, would not have been invented in the eighteenth century, or would not at any rate have been discovered in this country, if it had not been for the vast mineral wealth with which Great Britain has fortunately been provided. . . .

DUDLEY'S METHOD OF SMELTING IRON WITH COAL

At the commencement of the seventeenth century Dud Dudley . . . had proved the feasibility of smelting iron with coal; but the prejudice and ignorance of the work people had prevented the adoption of his invention. In the middle of the eighteenth century, attention was again drawn to his process, and the possibility of substituting coal for wood was conclusively established at the Darby's works at Coalbrook Dale. The impetus which was thus given to the iron trade was extraordinary. The total produce of the country amounted at the time to only 18,000 tons of iron a year, four fifths of the iron used being imported from Sweden. In 1802 Great Britain possessed 168 blast furnaces, and produced 170,000 tons of iron annually. In 1806 the produce had risen to 250,000 tons; it had increased in 1820 to 400,000 tons. Fifty years afterwards, or in 1870, 6,000,000 tons of iron were produced from British ores.

The progress of the iron trade indicated, of course, a corresponding development of the supply of coal. Coal had been used in England for domestic purposes from very early periods. Sea coal had been brought to London; but the citizens had complained that the smoke was injurious to their health, and had persuaded the legislature to forbid the use of coal on sanitary grounds. The convenience of the new fuel triumphed, however, over the arguments of the sanitarians and the prohibitions of the legislature, and coal continued to be brought in constantly though slowly increasing quantities to London. Its use for smelting iron led to new contrivances for insuring its economical production.

Decay of small industries. Scarcely less striking would be an account of the rise of machine production in other industries, following the use of steam power and cheap iron and steel. Shoe manufacturing, the grinding of flour, the slaughtering of meat-animals and the curing and packing of meat, the manufacture of watches, automobiles, etc., and various other industries have shown the same tendency toward the factory system of production. Regarding changes in our own country, Professor Ely writes[1]:

Let the reader call to mind the many things in our economic life which the world never saw before. He will, of course, think at once of the railway and of steam navigation, and of other applications of steam to industry. But these have brought other important new phenomena. The concentration of large masses of working-people in great factories of which they own no part, and under a single employer, such as we see daily, is something new for skilled mechanics; not that nothing of the kind ever existed before, but its existence is so much more common and affects so many more people that in its social aspects it is new. In the last century, and in previous centuries of the Middle Ages, artisans owned the tools which they used, and after they had fully mastered their trades, usually called no man master, but worked in their own little shops. Even within the memory of the author, still comparatively a young man, this condition of things has become less common. The smith, under

[1] Richard T. Ely, An Introduction to Political Economy, pp. 55–57. New York Chautauqua Press, 1889.

the spreading tree, of whom Longfellow sang, is disappearing. He has left the cross-roads in the little village and now works in a machine shop. His friends, the carpenter and the shoemaker, have accompanied him. A few artisans may stay to do repairing and other small work, but the cheaper processes of vast establishments have rendered this migration inevitable for the many. Only the few among artisans can live in the old style.

CONCENTRATION IN LARGE CITIES

Houses are constructed in large establishments and they are sent to small places where it is only necessary to put them together. Merchants have also been obliged to leave the villages where they were owners of independent establishments, to seek employment in immense city retail and wholesale shops, because the railroad has carried their customers away from them.

The amount of production increases continually, but the number of separate establishments where production is carried on decreases uninterruptedly. Milling serves as a good illustration. "The completion of the great mills has caused the abandonment and decay of hundreds of the picturesque, old-fashioned neighborhood mills. In 1870, according to the census of that year, there were in the entire country 22,573 grist mills, 58,448 hands, representing $151,500,000 of capital, and making a product worth $444,900,000. In 1880 the number of establishments was 24,338, the number of hands 58,407, the capital invested $177,300,000, and the value of the product was $505,100,000 (the price of flour had declined ten per cent in this decade). The increase shown in the number of establishments . . . is more apparent than real, the great bulk of flour having been made in a decidedly smaller number of mills in 1880 than in 1870. Since 1880 the blighting effect of the great merchant mills upon the small establishments has become visible to every one. According to the Miller's Directory for 1884, . . . there were at that time some 22,940 mills in the country, a decline of 1398 from the census figures of 1880. . . . From 1884 to 1886 . . . the number of milling establishments has declined to 16,856 . . . a loss in two years of more than twenty-six per cent." The number of mills in the South has declined more rapidly than elsewhere. In 1880, in North Carolina 1313 mills employed only 1844 men, but in the same

state there were only 632 mills in 1886. It is said that the number of mills in the country is destined to become very much smaller still. Readers can readily gather from census and trade reports many similar illustrations of this concentration of business, which is one of the main causes of the existence of present problems.

Tendency of mechanically expert nations toward indoor industries. Large portions of the world's population still remain in a condition of mechanical inexpertness. They find it more advantageous to live from the products of the soil, exchanging these for the manufactured products of the mechanically expert. Other populations, like those of our own West, while mechanically expert, occupy land of such abundance and fertility that they find it more profitable to cultivate land than to turn to the indoor industries. They use their mechanical expertness in contriving and operating farm machinery. They exchange their large surplus of farm products for the manufactured products of other people who are mechanically expert and who occupy lands of less extent and lower fertility. The latter, not having vast areas to cultivate, find less profitable opportunities for their mechanical expertness out of doors than indoors. Therefore they develop the indoor industries. England, which got a good start ahead of the rest of the world in this line of development, prospered amazingly. The eastern part of the United States, together with France, Belgium, Holland, and (lately) Germany, has been following in the same direction. As this tendency increases, the competition among the indoor industries is likely to become so intense as to reduce the profits and drive a certain percentage of the people back to the farms.

Taking the United States as a whole, it is rapidly ceasing to be primarily an agricultural country and is becoming a manufacturing country, following a similar development in England and northwestern Europe. Already more than half of our people live in towns of twenty-five hundred or more. Canada, South America, Australia, South Africa, and all countries colo-

nized by white men will doubtless follow in the same direction. There will then be left only the tropics in which to sell the surplus products of manufacture and from which to draw the surplus products of the soil. It is probable that the development of the indoor industries will be checked before that state is reached. In that case each country will have to preserve a balance, or equilibrium, between the indoor and the outdoor industries.

As pointed out in the chapter on The Genetic Industries, the advance in civilization and the general improvement of living conditions tend to add to the relative importance of the indoor as compared with the outdoor industries. The finer the goods we demand, the more work we make, generally speaking, for the indoor workers. Even farm work itself comes, in a sense, to be done indoors rather than outdoors. The substitution of the tractor for the horse may serve to illustrate this statement. The raising of horses is outdoor work; the manufacturing of tractors is indoor work. If we use more tractors and fewer horses a larger proportion of our workers will work indoors and a smaller proportion outdoors.

This is a process which must be expected to continue even though we remain a self-sufficing nation. If, ceasing to be a self-sufficing nation, we bring raw materials and products of the soil from distant portions of the earth and send in exchange the more refined products of the indoor industries, we must expect that manufacturing will become in larger and larger degree our dominant occupation.

CHAPTER XXI

TRANSPORTATION

Moving things over long distances. Since all industry consists in moving materials from one place to another, it follows as a matter of course that transportation must form an important part of the industrial system. That which we call transportation differs, however, from other kinds of work in that it consists in moving materials over long distances,—distances which are measured in miles rather than in inches, feet, or yards. The transportation system has been likened to the veins and arteries of the physiological organism, just as the telegraph and telephone systems have been likened to the nerves.

The development of the factory system as described in the preceding chapter and of large-scale production in general would have been impossible without cheap transportation.

> The railway and the factory have gone hand in hand in their development and in their economic results. With the means of transportation which existed two hundred years ago large industries would have been impossible. The substitution of turnpikes for common roads, of canals for turnpikes, and of railways for canals was as essential a part of industrial progress as was the development of the factory system.[1]

Without a wide market on which to sell its large product a large factory or manufacturing establishment would be an impossibility. In the days of restricted local markets, when each little community was almost self-sufficing, small shops having individual handicraftsmen could supply the needs of each such unit. Not the least important of the changes which have come about since the middle of the eighteenth century has been the

[1] President A. T. Hadley, Transportation, in Palgrave's "Dictionary of Political Economy."

battering down of the walls which divided one restricted market from another and the creation of nation-wide or world-wide markets instead of a series of local, restricted markets.

The widening of the market. Cheap transportation, more than anything else, has made possible the development of nation-wide and world-wide markets. Raw materials sometimes have to be brought long distances, especially in a case where several different kinds of raw material enter into the making of a given product. These different kinds of raw material are not always found in close juxtaposition. The iron ore of the Lake Superior region would be practically useless, because of its distance from the coal fields, were it not for cheap transportation on the Great Lakes, by means of which it can be carried almost to the mouths of the coal mines of Illinois, Indiana, Ohio, and Pennsylvania.

In other cases the raw material itself is produced over such wide areas as to make centralized and large-scale production an impossibility without cheap transportation. The slaughtering of meat animals and the curing and packing of the meat is a case in point. These animals must be grown on the farms and ranges, which cover considerable areas. Without cheap transportation they would have to be slaughtered and consumed nearer the sources of production; with cheap transportation they may be sent to a few large packing centers, and from these centers the meat can be distributed over practically the whole country and over considerable portions of the civilized world. Without cheap transportation every large city would be dependent upon the supply of meat that could be grown within driving-distance; that is, within such distances as the animals could travel on foot. They would have to be slaughtered near each center of consumption in order that the meat might be distributed economically. Without cheap transportation the cotton industry of New England could never have developed to such proportions as it has. The raw material is all produced hundreds of miles, and most of it thousands of miles, away from the factories. The manufactured product, in turn, is distributed over the entire country and considerable portions of

the civilized world. Every description of the Industrial Revolution in England gives great attention to the cotton and woolen industries, for it was in these industries that the transition was most striking. And perhaps the most striking feature was the long distances over which the material had to be transported and the wide markets in which the finished product could then be sold. Before the development of the railways, water transportation was the only cheap form, and England was peculiarly well situated with respect to ocean transportation.

However great the economies of large-scale production may be, if the cost of transportation were as great as it once was, the small producer, using locally produced raw materials and selling on a local market, would save so much on the cost of transportation as to give him an advantage over the biggest factory located a long distance away. The cheaper transportation becomes, the less the saving of transportation costs will figure as an advantage in industry. Every industry will then tend to be located in the place where other advantages are greatest. When freight costs one cent per ton per mile, one can readily see that one could ship a suit of clothes weighing, say, ten pounds a long distance without adding perceptibly to the cost of the suit. The freight for a thousand miles would be only five cents. If it cost twenty-five cents per ton per mile, distance would be a very large factor in the location of a clothing industry.

Water transportation developed first. Historically, water transportation was cheapened long before we had cheap land transportation. Consequently we find that commerce in a large sense developed first on the water. Great cities were located where there were advantages in water transportation. Considerable commerce has always been carried on, from the very earliest times, by means of caravans traveling over land, but the cost of this kind of transportation was so great that the commerce which developed under these conditions was necessarily confined to articles of luxury which embodied large value in small bulk. "The wealth of the Indies," as that term was used in Europe, consisted of silks, gold and silver and precious

stones, and a few rare delicacies for the very rich. Some considerable cities, however, developed along these overland routes. Damascus and Palmyra in Western Asia, Troyes and Nuremberg in Europe, may be cited as examples. But the great cities developed along water routes; Canton, Hankow, Calcutta, Delhi, Nineveh, Babylon, Bagdad, Tyre, Constantinople, Memphis, Alexandria, Venice, Genoa, Antwerp, and London may be cited as examples.

Water transportation developed first, of course, where it was safe; that is, on rivers or small bodies of inclosed water. The great rivers were the first great routes for cheap transportation. The valleys of the Nile, the Euphrates, the Tigris, the Ganges, and the Yangtse developed great civilizations, partly because they contained good soil and opportunities for irrigation but also because they furnished means of transportation.

The keel and the compass. The next stage was reached when the sailors ventured beyond the mouths of the rivers along the adjacent coasts and in inclosed seas like the Ægean, the Mediterranean, and the Baltic. The difficulty of navigation in those days was such as to make an ocean voyage extremely hazardous, if at all possible. The boats of those early days were flat-bottomed (that is, they had no keels); it was therefore impossible to sail in the teeth of the wind. Sails could be used only when the wind was favorable; that is, when it blew almost in the direction in which the sailors wanted to go. At other times they had to depend upon large numbers of oars worked by human muscles. The galley slave was a part of that system of transportation by human muscles. With the keel boat and the mariner's compass the use of sails was greatly enlarged, and sailors could venture out on the open ocean. There is some dispute as to the origin of the keel, but whenever or wherever it was invented, it must be regarded as one of the great inventions of history, for it enabled the sailor to sail almost into the teeth of the wind and, by skillful tacking, to go anywhere he wanted to, regardless of the direction of the wind. A little later the mariner's compass came into use, by means of which

the sailor could venture out of sight of land and still keep his bearings and reach his destination.

With these two inventions in their possession sailors could now leave not only the rivers but the inclosed seas and venture away from the seacoasts and traverse the broad, uncharted ocean. Columbus never would have dared to venture on his quest of an ocean route to India without these two inventions.

The world faces on the ocean. As a result of the discoveries of Columbus, Vasco da Gama, and others the world is said to have faced about. The various nations had formerly faced inward, with their backs to the ocean; the land united peoples, but the ocean divided them. Since that time they have tended to face outward (that is, to face the ocean), and it is now said that the land divides, but the ocean unites. While distances are great over these ocean routes, the building of larger ships propelled either by steam or by wind has made ocean transportation the cheapest of all forms. Where time is not a factor the huge sailing vessels can carry freight thousands of miles more cheaply than it can be carried hundreds of miles even on our best railways. Where time is a factor the cost is slightly greater, but still ocean freight rates are amazingly low. The question of economizing power and that of economizing time seem sometimes to come into conflict. The sailing vessel is the greatest economizer of power, but it is not economical of time.

The order of development of water transportation has been described as, first, the potamic stage; second, the thalassic; and, third, the oceanic. The following outline indicates roughly the general types of transportation now in use:

- TRANSPORTATION
  - Water
    - Potamic
    - Thalassic
    - Oceanic
  - Land
    - Paths, roads, and streets
      - Man power
      - Animal power
      - Mechanical power
    - Railways
    - Tramways
  - Air

The most primitive trade routes were probably paths traversed by human beings carrying their own loads. Beasts of burden were, however, utilized very early for this purpose. The accounts of early explorers in Central Africa describe the great forest as penetrated by a network of paths running from one village to another, so that a traveler could cross the continent by persistently following these paths. The great caravan routes mentioned above, across the desert and open country, made use of animals as beasts of burden.

Wheels. A wheeled vehicle is a great advance over the carrying of loads on the backs either of men or of animals. In some of the backward districts of China, porters still carry huge loads, and it is amazing what loads a man can carry who has been trained to it all his life. But where the road is made suitable for wheeled vehicles the porter can haul about three times as much as he can carry. On a paved street or a macadamized road in this country a pair of good horses will haul from two to four tons, whereas about six hundred pounds is a load for a pack horse. Even on the common dirt roads of the country, when they are reasonably well kept and not muddy, a pair of horses will haul from a ton and a half to two tons.

Most people use roads and streets more than they use railroads, though it is difficult to say that one is more important than the other. They are all so interlocked and interdependent that it is hard to treat them separately. For short distances we must, of course, depend upon roads and streets, using the railroad for transportation over long distances and the hauling of heavier loads.

Animal power. On the roads and streets man power is still used, as suggested above, in some backward countries. It is cheap only when labor is very cheap. A man can live on much less grain than is required to feed a horse. If a man is willing to live largely on a grain diet it will hardly pay him to keep a horse where grain is very scarce. Where the population is so dense that it is necessary to conserve every ounce of food, and men are reduced to the barest necessities of life, it is uneconomi-

cal to use animal power except for heavy loads which are too great for human muscles. Where there is land enough to provide food not only for human beings but for animals the use of animal power becomes economical, because much more work can be done, more land cultivated, more goods transported, and thus the animals can be fed and still leave more to supply human needs than would otherwise be produced.

Mechanical power. There is a tendency at the present time to substitute mechanical power for animal power even on the roads and streets. The development of the automobile and the auto truck is opening up great possibilities in this direction. It is not probable, however, that mechanical power will entirely displace animal power, any more than that animal power could entirely displace human power. The tendency in our civilized communities is for the use of human power for transportation purposes to be confined to shorter and shorter distances; carrying goods from the grocer's delivery wagon to the kitchen door, carrying coal from the curbstone to the cellar, moving goods within warehouses, etc. will probably continue to be done by human muscles for some time to come. A similar development will probably take place with respect to animal power. For long distances and the carrying of heavy loads the auto truck will probably prove increasingly economical, but for short distances the horse is still and will probably continue for some time to be more economical. The economy of the auto truck, however, depends upon the character of the roads. With the common dirt roads which formerly prevailed in the country it is doubtful if it could have been used economically even if it had been developed.

Better tracks. It is interesting to note how every advance in methods of land transportation seems to depend upon the quality of the road or track. Wheeled vehicles could be substituted for pack saddles only when there were roads suitable for wheeled vehicles. Well-kept roads and paved streets are necessary before mechanical power can be substituted for animal power in ordinary hauling. The acme of track-building is the railway,

where the wheeled vehicle runs on steel rails. The friction and loss of power between the wheel and the track is reduced to the minimum. In a similar way the modern locomotive is the climax of the development of mechanical power. Thus the improvement in mechanical devices goes hand in hand with the improvement in road or track. Ever since the first building of railways and the use of locomotive engines this parallel development has continued. The first locomotives were small and crude affairs as compared with the magnificent engines which now haul our freight and passenger trains. The powerful engines of today, however, could scarcely run on the old-fashioned railway track, with its light iron rails. Improvement in the manufacture of the steel rail has had to go hand in hand with the improvement of the locomotive engine.

Railways. It may seem strange to young people to be told that there are men now living who can remember when there were no railways. Such men, of course, are now somewhat rare, but the fact remains that the present age of the railway does not exceed the span of a reasonably long human life. The railway mileage of the world has increased by leaps and bounds. In no country has the development of the railway kept pace with its development in the United States, though in proportion to their need for railway transportation England and Germany have kept close behind us. Our area is so vast and our people have been spreading so rapidly over this vast area that a great demand for transportation facilities has been created. In addition we have had an abundance of material for their construction. Moreover, our people have shown a great deal of initiative and enterprise in pushing the business. In some countries this spirit of enterprise has been so lacking that the governments themselves have had to take hold of the matter and build the roads at government expense.

Public or private railways. The problem of railway management, however, has been a very difficult one in every country. In one sense the railway system would seem to belong to the general system of streets, roads, and highways. The general

experience of mankind has shown that streets, roads, and highways should be public rather than private. This has led to the assumption that railways should be treated similarly. There is, however, this important difference. On the streets, roads, and highways private individuals use their own vehicles, travel freely, and go and come when they please. The actual work of transportation, therefore, is not carried on by the public. This method would be impossible on a railway. The trains must run on schedule time and under a well-administered system; otherwise there would be nothing but confusion and inefficiency and multitudinous wrecks. If the public undertakes to own the railways it would have to go much farther than it does when it owns the streets and highways. It would either have to operate all the vehicles (that is, trains) or lease the road to a single company which would have the exclusive use of the tracks. Obviously even two independent individuals or companies could not operate trains on the same track. There are, therefore, two analogies which may be drawn between the highway system and the railway system. Since the government owns the highways one group of people, reasoning by analogy, say that the government ought to own the railways. On the other hand, it is asserted that since private individuals operate the vehicles that are used on the highways, and the government is not in the transportation business at all, a similar rule should prevail with respect to railway transportation—private individuals or companies should do the hauling and therefore own the railway. In this country we have followed the latter principle, but it has made necessary a considerable regulation of the companies which do the hauling. A third possibility is that the government should build and own the tracks and then lease them to operating companies.

Monopolistic character of a railway. From the very nature of the case a railway must be operated as a monopoly or quasi monopoly. As suggested above, it would be impossible for even two companies to run trains on the same track or over the same railway system unless one became absolutely subject to the

administrative rules of the other. This quasi-monopolistic character of the railway has given the management more control over rates than individual draymen, freighters, cabmen, etc. can exercise over freight and passenger rates in the vehicles that are operated on public highways. In order to hold in check this quasi-monopolistic power of the railway a great deal of legislation has been enacted in this country, beginning with the granger laws of the seventies and eighties of the last century and culminating in the Interstate Commerce Act of 1887 and the subsequent development of the powers of the Interstate Commerce Commission. This commission now has power to prescribe rates and to exercise general control and supervision over the administration of all the railways of the country.

Short-distance and long-distance hauling. In several countries, such as Germany, Switzerland, Australia, and others, the opposite alternative has been chosen. The government has built and continues to operate the railways. In Germany it was primarily a military enterprise; in order that she might build up her military power and be able to concentrate vast armies and supply them at any point, she needed a well-articulated railway system. In this respect her policy resembled that of the Romans, who were great road builders in their day. Their system of roads enabled them to march their armies rapidly from one part of the Empire to another, to concentrate wherever concentration was needed, and thus to outmaneuver their enemies.

As to the effects of the two systems on peaceful commerce, there are many different opinions. In some respects freight rates are more favorable in Germany than in the United States; in others they are much more favorable in the United States. No railway system in the world compares with that of the United States in the cheapness and swiftness of long-distance freight. Our railways, however, have given comparatively little attention to local freight. In the efficiency and cheapness with which local freight is handled they are far behind the railroads not only of Germany, where the government owns and operates

the roads, but also of England, where they are operated by private companies. The difference, therefore, is probably not to be accounted for on the ground of public or private ownership. In a densely populated country, where the distances are never very great, it would be quite natural that short-distance, or local, freight should form a large part of the business of the railroad; whereas in a country of such vast expanse as ours it would be equally natural that long-distance freight should form the chief part of the railroad business. Each railway system, therefore, tends to specialize in that field where its chief business lies.

Arguments against both sides. No final conclusion is possible as to the relative merits of public and private management. As Sir Roger de Coverley was in the habit of saying, "Much might be said on both sides." Each side has its partisans, and each partisan seems peculiarly unable to appreciate the weaknesses of his own side and the strong points on the opposite side. In reading these arguments one gets the impression that there is very little to be said in favor of either, but much that can be said against both. The arguments against private ownership and operation are based mainly on the monopolistic character of the railroad business, the rapacity of railroad managers, and the general distrust of "big business." The arguments against public ownership and operation are based mainly upon the inefficiency of public business, the danger that politics rather than business needs will determine rates and other details of the business, and the general distrust of the politician.

These considerations might very properly convince one that the same system is not necessarily the best for all countries. In a country which is dominated by autocratic and military standards, where business is contemptuously spoken of as "shopkeeping," where government service attracts a better class of men than business attracts, and where men are chosen for high positions not because of their talkativeness or popularity but because of their knowledge and efficiency, the objections to public ownership and operation are weak and those against

private ownership and operation are weighty. In a country, however, which is dominated by democratic ideals, where business and all honest occupations have always been regarded as just as honorable as government or military service, where, on the whole, business attracts a better class of men than politics, and where men are chosen for high public positions mainly on the ground of their ability to make stump speeches rather than on the ground of their knowledge and efficiency, the objections to government ownership and operation are very strong and those against private ownership and operation are relatively weak. There is a strong probability, however, that the persuasive talkers will be able to enlarge their powers, at the expense of the efficient doers, by persuading the voters to intrust more and more power to them, the talkers.

CHAPTER XXII

MERCHANDISING

Personal utility. In a previous chapter it was pointed out that three kinds of utility are produced by human industry,—form utility, place utility, and time utility. It would be possible, if one cared to draw somewhat finer distinctions, to speak of personal utility as a special phase of place utility, or, on the other hand, personal utility could be named as a fourth kind. When an object is transferred from a person who has no use for it to a person who has a use for it, its utility, or power to satisfy desires, is increased by the transfer, just as truly as though it were transferred from a locality where it is not needed to a locality where it is needed.

There is an ancient fallacy to the effect that someone must gain and someone must lose in every trade. This fallacy has been exploded so often that it hardly seems necessary to repeat the process here. Two farmers may trade horses and both gain. A wool-grower who has a surplus of wool and a shoemaker who has a surplus of shoes may exchange products to the advantage of both. A boy who has a surplus of marbles but a deficit of taffy might advantageously exchange some of his surplus marbles for taffy, carrying on the exchange with another boy who had a surplus of taffy but a deficit of marbles. By this process the personal utility of both marbles and taffy would be increased.

Merchandising may be productive of utility. If it is agreed that the power of goods to satisfy wants is increased when they get into the possession of the people who really need them, it ought not to be difficult to see that the individual who facilitates this process is a productive individual; that is,

his work results in increased utility. Even if we leave transportation and the storing of goods out of account for the present and consider merely the transfer of goods from one person to another in the same locality, we shall find that unless there were merchants or mercantile houses the various producers would find difficulty in making the necessary exchanges. The farmer with a surplus of wheat might have some difficulty in finding a shoemaker who wanted wheat and was willing to exchange shoes for wheat. Under a highly developed mercantile system a farmer can always find buyers for his wheat. He can also find a shoe store where he can buy shoes, a clothing store where he can buy clothing, and so on.

These men who specialize in trading are sometimes called middlemen, and it is not difficult to see that they are not only exceedingly useful but in some cases absolutely necessary. It may sometimes happen that too many middlemen intervene between the producer and the consumer, but some middlemen are absolutely necessary unless the producer will undertake to peddle his products around among consumers or unless the consumers will undertake to search for producers who have for sale exactly what they (the consumers) desire to purchase. An immense amount of time and trouble is saved when every producer can sell directly to a middleman and go on about his work of production, while at the same time every consumer can purchase exactly what he wants from some merchant.

The middleman as a timesaver. Generally speaking, it will be observed that in any community where the average person considers his time to be valuable, there are a great many middlemen intervening between producers and consumers and very little direct marketing. In a community, however, where wages and incomes are low and the average person finds his time of very little value, comparatively few middlemen intervene between producer and consumer, and there is a great deal of direct bartering. The open market place, where producers and consumers meet, flourishes in communities of the latter type but not in communities of the former type.

There is an old adage that time is money. Where time is valuable it is economized; where it is of little value it is not economized. Where the average housekeeper considers her time valuable she does not care to spend much time marketing and dickering with producers who bring their stuff to market. She prefers to market by telephone. This is a great saving of time, but it is generally expensive in terms of money. She is literally paying somebody else to do for her that which she might do for herself if she cared to go to market and deal directly with the producers. Similarly, where the producer considers his time valuable he would prefer to sell his product in bulk to some middleman rather than to spend his time in dickering with consumers and selling his product in small lots. The system of direct marketing saves money, it is true, but it wastes time; the system of indirect marketing saves time but, in a sense, wastes money. The problem in economy which every producer and every consumer must decide for himself is whether his time is worth as much as the money which he might otherwise save.

The peasant women of certain overcrowded countries, who are unable to do farm work and have very little else in the way of remunerative work which they can do, find going to market a means of saving money. They can sell directly to the consumers and cut out middlemen's costs and profits. Since they consider their time as worth practically nothing, every penny which they can save in this way adds so much to the family income. The American farmer, with a somewhat higher standard of living, and the farmer's wife, who considers her time as worth something, if not for earning money by remunerative work, at least for housekeeping or self-cultivation, refuses to spend her time in this way. Therefore it is very difficult in this country to maintain a system of direct marketing. It is the belief, however, of many students of the problem that the Americans have gone too far in the direction of saving time,—so far, in fact, as to waste more money than necessary in middlemen's costs and profits.

Marketing sometimes a social function. Another factor enters into the success of public markets, where producer and consumer meet. In those countries where the system still prevails, going to market has become a social function. The market place is the place where citizens meet and where the women make their social calls and pay their social obligations. This phase of the question has played a very important part in history. The Roman Forum, for example, was simply the market place, in which the farmers from the surrounding country and the people of the city of Rome met, primarily for purposes of exchange and secondarily for purposes of social intercourse and political discussion. The latter functions gradually displaced the former, and the Roman Forum gradually became the center of Roman politics and eventually the center of the world. The Olympic games, which were for many centuries the center of Greek life, developed in connection with a fair which was held for the exchange of products. While the Greek people were busy with their exchanges the young men took part in athletic and intellectual contests; eventually these contests became the chief feature, and the mercantile function almost disappeared from sight.

The social function of going to market has been revived in a number of ways in recent times. Great department stores, in order to attract trade,—especially that of ladies who have time for social diversion,—have introduced the paraphernalia of the drawing room, with pink teas and other accessories. They are deliberately striving to make afternoon shopping a social diversion, thus restoring, in the field of the marketing of frills, some of the features which originally developed in connection with the marketing of the necessaries of life.

Buying large quantities and selling in small parcels. Another very important function performed by the mercantile house is that of receiving products in large quantities from the producer and dividing them into small parcels for the consumer. This breaking up into small parcels is a work of utility; it meets the convenience of both producer and consumer. The convenience

of the producer is met by his ability to sell in bulk; the convenience of the consumer is met by his ability to buy in small parcels. This may, without doing violence to our language, be called a kind of form utility. The goods are bought in one form and sold in another. There is a certain analogy between this process of breaking goods up into small parcels and the process of manufacturing, in which the forms of goods are changed in other ways.

Storing goods. One of the most important functions of the mercantile class, however, is that of storing goods. In fact, it is still customary to speak of certain mercantile houses as stores. The storing of goods produces time utility. They are kept from a point in time when they are not especially needed until a time when they are especially needed. Their utility is thus increased. This function of storing goods is particularly important in the case of goods which are produced by a seasonal industry, such as agriculture. The wheat is harvested during one period of the year, but needs to be consumed during the entire year. Unless someone were ready to store this product, it would have to be used very inefficiently at one period of the year, and there would be a scarcity at another period.

Utility of storing without monopolizing. Contrary to a certain popular belief, the effect of storing vast quantities of farm products in warehouses is beneficial rather than otherwise. No speculator or warehouse owner would have any motive for storing products except that of getting a higher price later. He could not get a higher price later unless the goods were scarcer later. If they are scarcer later it is very much to the interest of society that they be stored rather than consumed at once. During the period of high prices accompanying the World War—say in May, 1917—it was found that a great deal of grain was being stored up. There naturally developed a certain popular dissatisfaction. Being shortsighted, we did not appreciate what was likely to be our situation several months later. The only thing we saw was that prices were distressingly high. We saw this in connection with another fact; namely,

that large quantities of wheat were being stored. We thought, naturally enough, that if that wheat were taken out of storage and sold at once, prices would not be so high. If, however, we had been a little more farsighted we should have looked ahead and considered what the situation would be later. If wheat is going to be more abundant at some time in the future than now the price will fall. If that were the expectation nobody would be willing to store a single bushel of wheat until that time. Everybody would want to sell his wheat at once. If those who are in a position to judge believe that wheat will be scarcer in July than in May, and the price therefore higher, they find it to their interest to store up these products and hold them. If they are correct in their anticipation it is also very important for society at large that they, or somebody, should store up wheat; otherwise we should consume wastefully this month and go hungry later on. It ought not to take very much forethought or reasoning power to understand this. It is, however, a sad commentary on the shortsightedness of many of our people and even of men in high political positions that this is so imperfectly understood and that we are so generally resentful toward those who are performing this important function of storing.

Another fact which should be taken into consideration is that formerly large numbers of people, both producers and consumers, did their own storing, whereas at the present time that work is turned over to a special group of men who own elevators, cold-storage warehouses, and other storage facilities. In a less highly organized state of society many farmers saved grain in their own bins, and potatoes, fruit, and vegetables in their own cellars. At the same time many consumers bought supplies in advance and stored them in their own cellars. At the present time comparatively few farmers hold their products, finding it cheaper to sell them as soon as produced than to build and maintain their own storehouses and run their own risk of loss or deterioration of the products. Moreover, consumers have generally got out of the habit of buying supplies in advance and keeping them stored until needed, finding it cheaper

to order supplies as they are needed, depending upon other people to do the storing. While both producer and consumer are turning this work over to a special class, they must not forget that the only motive which this special class has for doing this special work is the hope of a profit. If they can make a profit and still furnish the service cheaper than producers and consumers can furnish it for themselves, they have earned their profit.

Cornering, or monopolizing, is destructive of utility. We should be careful, however, to distinguish between storing for sale on a competitive market and monopolizing for sale on what is known as a cornered market. If there were collusion among all those who own warehouses or who are in a position to store products,—an agreement to control the supply and fix prices artificially,—there would be a real grievance, and the individuals who are guilty of such a practice should, of course, be very severely dealt with. But if we can once satisfy ourselves that the products are being stored for sale on a competitive market, we can rest perfectly easy in our minds, because no one could make any money by storing in this way unless it were genuine social service to do so. By social service, of course, we do not mean philanthropic service, but merely useful work.

Standardization. Another very important function performed by the mercantile class is what is known as the classification, or standardization, of goods. The producer of farm products especially cannot produce goods of uniform kind and quality. On every apple tree there will be apples of various grades, and in every large orchard likewise. In every poultry yard there will be fowls of different qualities. The consumer who tried to purchase directly from the farm might not find exactly the grade or quality which he desired. When the farmer sells his products in bulk the middleman will frequently classify or grade them into a large number of grades. Take such a simple product, for example, as broilers. It is very difficult for one poultryman to produce a large number of broilers all of the same size, weight, quality, and general condition. A hotel or

restaurant, however, wishes to treat all customers alike. It does not wish to buy broilers in a nondescript, or ungraded, mass. If it did so one customer would get one kind of dish and another customer another kind, varying in size and quality. This would produce dissatisfaction. A dealer buys broilers from a large number of poultrymen and classifies them very minutely. There are said to be over one hundred different grades and classes. Each hotel and restaurant and every private consumer can get from such a dealer exactly what he wants. Multitudes of other illustrations could be given, but enough has been said to show that merchandising is a very important factor in the economy of human energy and the promotion of national prosperity.

Deception always destruction. It is quite certain, however, that certain practices will grow up in connection with merchandising which are reprehensible. The ancient Greeks regarded Hermes, or Mercury, not only as the herald of the gods but also as the god of boundaries, markets, and weights and measures, and as the special patron of merchants, gamblers, and thieves. There is probably no branch of human industry or business which lends itself so easily to deception and adulteration and which furnishes such temptations to high-pressure advertising and salesmanship. The old adage that honesty is the best policy is doubtless appreciated by merchants of the better class, but unfortunately there are always a good many men who are doing some kind of merchandising to whom this adage seems more theoretical than practical. The arts of persuasion are developed to a high degree of proficiency and pass easily over into the arts of deception. The justification given is generally summed up in the words "business is business." It is not necessary to present any arguments to show that deception contributes nothing to national prosperity. What one gains by deception, someone else necessarily loses. It is probably this phase of the question that has led to the hasty conclusion, which is far too widely accepted, that somebody always loses in a trade. That general conclusion was combated at the beginning

of this chapter. In so far as trading takes the form of deception, however, the conclusion is entirely justified.

Advertising. Advertising occupies a prominent place among the forms in which the art of persuasion is carried to a high state of development in modern times. To what extent advertising is economically justified has been a difficult question and must remain so. Advertising is sometimes educational. The individual sometimes learns the price of things from advertisements, also where he can get something which he really wants and has wanted for a long time. Without the advertisement he might have found difficulty in getting it. This applies, however, mainly to new products that have recently been put upon the market. One scarcely needs an advertisement to tell one of the existence of soap or codfish or to acquaint one with the fact that such things are to be purchased at stores. In many cases of this kind the only effect of advertising is to persuade the consumer to use one man's product rather than another's. One producer realizes that if he does not advertise, consumers may buy the other man's product. The other man is then compelled to advertise in order to defend himself against the first advertiser, and thus it becomes a race, or contest, to get the customer's trade, and no addition whatever is made to the national wealth or to the well-being of society. It is not improbable that eventually the public will exercise its authority and use its power of compulsion to limit or redirect the advertising business. This, however, would be a somewhat dangerous experiment, because such public authority would have to be exercised by public officers. The worst forms of advertising are not found among merchants but among candidates for public office. The man who has succeeded in getting elected to office by campaigning, which is a kind of advertising, is not necessarily the best man to decide upon what is good and what is bad advertising either in political campaigning or in merchandising.

CHAPTER XXIII

PERSONAL AND PROFESSIONAL SERVICES

Causing productivity in others. Falstaff said, "I am not only witty in myself, but the cause that wit is in other men." There are many men and women in every community who are not directly producing wealth, but who are the cause of productivity in others. The teacher who trains students in the productive arts is, to say the least, a cause of productivity and becomes a contributor to national prosperity. The singer, the poet, and the artist who inspire to strenuous action and noble deeds likewise contribute their share to the greatness of the nation. The military band is a part of the fighting strength of the army, even though its members never handle a destructive weapon of any kind.

The teacher, the preacher, the musician, the poet, and the artist, however, sometimes forget their function in a great nation and at times seem almost to imagine that they are the objects for which the nation exists. At any rate they have been known to go so far as to resent the idea that they have a purpose beyond that of contributing to knowledge for its own sake or art for its own sake.

The social function of art, religion, etc. Quite different was the attitude of a great French artist when he found his country in the throes of the life-and-death struggle which began with the invasion of 1914. Speaking before a gathering of French artists, he said that in that crisis no art would be tolerated "which was not noble, robust, proud, and an inciter of high thoughts and delicate sentiments—an art of heroic joy." Facing the future, he continued: "You would not tolerate anything less today. Then why should you tolerate anything less

hereafter, in that tomorrow when our duties shall be changed?" Here was a full acceptance of the view that art has an end beyond itself and is not its own excuse for being.

Upon this topic the words of Thomas Carlyle are not only instructive but inspiring as well:

> Two men I honor, and no third. First, the toilworn Craftsman that with earth-made Implement laboriously conquers the Earth, and makes her man's. Venerable to me is the hard Hand; crooked, coarse, wherein notwithstanding lies a cunning virtue, indefeasibly royal, as of the Scepter of this Planet. Venerable too is the rugged face, all weather-tanned, besoiled, with its rude intelligence; for it is the face of a Man living manlike. O, but the more venerable for thy rudeness, and even because we must pity as well as love thee! Hardly-entreated Brother! For us was thy back so bent, for us were thy straight limbs and fingers so deformed: thou wert our Conscript, on whom the lot fell, and fighting our battles wert so marred . . .
>
> A second man I honor, and still more highly: Him who is seen toiling for the spiritually indispensable; not daily bread, but the bread of Life. Is not he too in his duty; endeavoring towards inward Harmony; revealing this, by act or by word, through all his outward endeavors, be they high or low? Highest of all, when his outward and his inward endeavor are one: when we can name him Artist; not earthly Craftsman only, but inspired Thinker, who with heaven-made Implement conquers Heaven for us! If the poor and humble toil that we have Food, must not the high and glorious toil for him in return, that he have Light, have Guidance, Freedom, Immortality?—These two, in all their degrees, I honor: all else is chaff and dust, which let the wind blow whither it listeth.

Government. The officers of the government who preserve order and protect lives and property contribute a large share to national prosperity. An army, whose business may seem to be destruction rather than production, by protecting against invasion from without and insurrection and disorder from within may be an indispensable factor in prosperity.

It is, of course, possible to have too many so-called non-producers, not only in the army but in public offices of different

kinds as well as in the various talking and ornamental professions. The work of the soldier, for example, is one of the most honorable of all professions so long as national defense is necessary, but even the professional soldier himself will generally agree that it would be an excellent thing if war could be eliminated and the work of the soldier made unnecessary. The same reasoning may be applied to many other occupations. No work is more beneficent and honorable than that of the physician; but every physician, if he be worthy of the name, is working for the elimination or prevention of disease. If it were possible to carry this work to completion it would greatly reduce the need for physicians. Litigation among the citizens of the nations is, so far as it goes, almost as wasteful as war between nations. If it could be eliminated it would greatly reduce the demand for lawyers. An army of very able and talented men would thus be released for other kinds of work for which the need persists. The best lawyers, like the soldiers and physicians, frankly recognize this and are willing to work to reduce the amount of litigation.

Productive and unproductive labor. Economists have generally recognized a distinction between productive and unproductive labor, but they have not always agreed as to the line of division. Adam Smith[1] wrote:

> There is one sort of labor which adds to the value of the subject upon which it is bestowed: there is another which has no such effect. The former, as it produces a value, may be called productive; the latter, unproductive labor. Thus the labor of a manufacturer adds, generally, to the value of the materials which he works upon, that of his own maintenance, and of his master's profit. The labor of a menial servant, on the contrary, adds to the value of nothing. Though the manufacturer has his wages advanced to him by his master, he, in reality, costs him no expense, the whole of those wages being generally restored, together with a profit, in the improved value of the subject upon which his labor is bestowed. But the maintenance of a menial servant never is restored. A man grows rich by

[1] The Wealth of Nations, Vol. I, pp. 332–334. Clarendon Press, Oxford, 1880.

employing a multitude of manufacturers: he grows poor by maintaining a multitude of menial servants. The labor of the latter, however, has its value, and deserves its reward as well as that of the former. But the labor of the manufacturer fixes and realises itself in some particular subject or vendible commodity, which lasts for some time at least after that labor is past. It is, as it were, a certain quantity of labor stocked and stored up to be employed, if necessary, upon some other occasion. That subject, or, what is the same thing, the price of that subject, can afterwards, if necessary, put into motion a quantity of labor equal to that which had originally produced it. The labor of the menial servant, on the contrary, does not fix or realise itself in any particular subject or vendible commodity. His services generally perish in the very instant of their performance, and seldom leave any trace or value behind them, for which an equal quantity of service could afterward be procured.

The labor of some of the most respectable orders in society is, like that of menial servants, unproductive of any value, and does not fix or realise itself in any permanent subject, or vendible commodity, which endures after that labor is past, and for which an equal quantity of labor could afterwards be procured. The sovereign, for example, with all the officers both of justice and war who serve under him, the whole army and navy, are unproductive laborers. They are the servants of the public, and are maintained by a part of the annual produce of the industry of other people. Their service, how honorable, how useful, or how necessary soever, produces nothing for which an equal quantity of service can afterwards be procured. The protection, security, and defence of the commonwealth, the effect of their labor this year, will not purchase its protection, security, and defence for the year to come. In the same class must be ranked some both of the gravest and most important, and some of the most frivolous professions: churchmen, lawyers, physicians, men of letters of all kinds; players, buffoons, musicians, opera-singers, opera-dancers, etc. The labor of the meanest of these has a certain value, regulated by the very same principles which regulate that of every other sort of labor, and that of the noblest and most useful produces nothing which could afterwards purchase or procure an equal quantity of labor. Like the declamation of the actor, the harangue of the orator, or the tune of the musician, the work of all of them perishes in the very instant of its production.

Both productive and unproductive laborers, and those who do no labor at all, are all equally maintained by the annual produce of the land and labor of the country. This produce, how great soever, can never be infinite, but must have certain limits. Accordingly, therefore, as a smaller or greater proportion of it is in any one year employed in maintaining unproductive hands, the more in the one case and the less in the other will remain for the productive, and the next year's produce will be greater or smaller accordingly; the whole annual produce, if we except the spontaneous productions of the earth, being the effect of productive labor.

John Stuart Mill[1] makes use of the same distinction in the following paragraphs, though he modifies it so as to allow for labor which is mediately, or indirectly, productive.

LABOR IS INDIRECTLY AS WELL AS DIRECTLY PRODUCTIVE

I shall therefore, in this treatise, when speaking of wealth, understand by it only what is called material wealth, and by productive labor only those kinds of exertion which produce utilities embodied in material objects. But in limiting myself to this sense of the word, I mean to avail myself to the full extent of that restricted acceptation, and I shall not refuse the appellation productive to labor which yields no material product as its direct result, provided that an increase of material products is its ultimate consequence. Thus, labor expended in the acquisition of manufacturing skill, I class as productive, not in virtue of the skill itself, but of the manufactured products created by the skill, and to the creation of which the labor of learning the trade is essentially conducive. The labor of officers of government in affording the protection which, afforded in some manner or other, is indispensable to the prosperity of industry, must be classed as productive even of material wealth, because without it, material wealth, in anything like its present abundance, could not exist. Such labor may be said to be productive indirectly or mediately, in opposition to the labor of the ploughman and the cotton spinner, which are productive immediately. They are all alike in this,

[1] Principles of Political Economy (from the fifth London edition), Bk. I, chap. iii, p. 76. New York, 1909.

that they leave the community richer in material products than they found it; they increase or tend to increase material wealth.

By unproductive labor, on the contrary, will be understood labor which does not terminate in the creation of material wealth; which, however largely or successfully practised, does not render the community and the world at large richer in material products, but poorer by all that is consumed by the laborers while so employed.

All labor is, in the language of political economy, unproductive, which ends in immediate enjoyment, without any increase of the accumulated stock of permanent means of enjoyment. And all labor, according to our present definition, must be classed as unproductive, which terminates in a permanent benefit, however important, provided that an increase of material products forms no part of that benefit. The labor of saving a friend's life is not productive, unless the friend is a productive laborer, and produces more than he consumes. To a religious person the saving of a soul must appear a far more important service than the saving of a life; but he will not therefore call a missionary or a clergyman productive laborers, unless they teach, as the South Sea Missionaries have in some cases done, the arts of civilization in addition to the doctrines of their religion. It is, on the contrary, evident that the greater number of missionaries or clergymen a nation maintains, the less it has to expend on other things; while the more it expends judiciously in keeping agriculturists and manufacturers at work, the more it will have for every other purpose. By the former, it diminishes, *cæteris paribus*, its stock of material products; by the latter it increases them.

Both these eminent writers seem to look upon the production of vendible commodities, either directly or indirectly, as the end of economic activity. From that point of view even cheap and tawdry articles which are of no use to anyone, as a puritanical moralist would say, are nevertheless wealth, and the labor which produces them is productive labor. On the other hand, the philosopher who elevates our thoughts above the plane where such things are enjoyed would be an unproductive laborer, and yet this philosopher might be doing infinitely more for the ultimate prosperity and greatness of the nation than the manufacturer of such articles.

There is, however, something finely democratic in the attitude of these writers. It assumes that whatever the people want, as expressed either by their votes or by their purchases, they are entitled to have and that no one, not even the philosopher, should set himself up as a moral censor. Their judgment, as expressed through their purchases of vendible commodities, is the final word in such matters. Only such labor as supplies, either directly or indirectly, things which the people are willing to purchase is to be regarded as productive according to their point of view.

Distinction similar to that between producers' and consumers' goods. Another and more satisfactory way of looking at this distinction between productive and unproductive labor is to compare it with the distinction between producers' and consumers' goods. It would not occur to anyone that a writer was disparaging bread if he were to say that it is a consumers' good and not a producers' good. To say that a sewing machine is a producers' good, while a coat is a consumers' good, is not necessarily to place the machine in a superior class and the coat in an inferior class. And yet to say that a coat is a consumers' good may mean very much the same as to say that it is an unproductive good. In the above passage Mill distinctly states that unproductive labor is not necessarily useless labor.

Much of that which these writers include under unproductive labor may, however, be productive even in the technical sense in which they use that word. A menial servant, for example, who saves the time of his employer and enables him to devote his energies exclusively to highly productive work really contributes to the production of vendible commodities, even though he himself has no direct connection with any such article; but if a menial servant or anyone else merely helps a man of leisure to while away his idle hours by furnishing amusement or entertainment, his work can scarcely be called productive in any sense.

Wherein labor contributes to national prosperity and wherein it does not. After all, the important distinction is not between

the labor which produces vendible commodities and that which does not. The distinction of real importance is that between labor which contributes to the well-being, prosperity, and greatness of the nation and that which does not. Labor may produce a commodity which sells for a high price on the market, —which satisfies an intense desire which people will pay a high price to have gratified; and yet, if the desire is a vicious one, if its gratification weakens in mind or body those who buy the commodity, or if it merely incapacitates them temporarily for useful work, that labor would have to be classed as unproductive. On the other hand, the labor of the musician, the poet, or the preacher, if it does not tend to produce softness but inspires to strenuousness and productivity, if it rationalizes the consumption of wealth, if it makes people desire the right things, would have to be classified as highly productive. To be sure, a book, a poem, or a picture is a vendible commodity, and its producer would be called a productive laborer, under the classic definition. If one wanted to insist upon it one might go so far as to say that the sound waves produced by the musician or the talker are also material things and vendible, but it is not necessary to go so far as that.

This distinction not so clear as the other. One disadvantage in the position which we are taking—in favor of the view that the important distinction is that between labor which adds to the well-being of the nation and labor which does not—is that it leaves a great deal to the opinion of the student. Whether labor produces a vendible commodity or not is generally a question of ascertainable fact. Whether it is good for the nation or not is sometimes a matter of opinion. There could scarcely be any denial, for example, that a distillery produced a vendible commodity, but there has been a great deal of difference of opinion as to whether it was a benefit or an injury to the nation. On the other hand, it could scarcely be claimed that a moral leader who persuaded people to become total abstainers was producing vendible commodities, but there are those who hold to the opinion that he is contributing to the general well-being of the nation.

Granting the advantage, from the standpoint of clearness, of the classical distinction between productive and unproductive labor, the present writer nevertheless contends that the distinction between that labor which is beneficial and that which is not is much more important. Probably as large a proportion of the labor which is engaged in producing material commodities for the market is wasted as of the labor which is not so engaged. Probably as large a proportion of that labor which is not engaged in producing material commodities is advantageous to the nation as of that which is so engaged. The prosperity and well-being of the nation will depend upon the proportion of the people who are doing useful work rather than upon the proportion that are producing material commodities.

All labor which is not engaged in the production or handling of material commodities which are bought and sold on the market is grouped, not only in this chapter but in various census reports and other public documents, as professional and personal service. Professional service is limited to a few learned or highly skilled occupations, such as law, medicine, theology, teaching, governing, acting, etc. Personal service includes such a multitude of occupations as would fill a small catalogue. Barbers, bootblacks, valets, domestic servants, and all others who render their service directly, rather than indirectly through the medium of a material product, may be said to render personal service. If it is genuine service, whether it is professional or personal, it is a factor in the prosperity, power, and greatness of the nation.

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PART IV. EXCHANGE

CHAPTER XXIV

WHAT IS VALUE?

Exchange a part of the division of labor. In the chapter on The Division of Labor it was pointed out that there is a great advantage to be gained from specialization. When the whole industrial society is so organized that each person can do that for which he is best fitted by nature, training, inclination, and location, the general quality of the work is better than it would be if everyone had to learn a great many things. It was also pointed out that the division of labor necessitates the exchange of products and services. In the economics of the private family the subject of exchange is so unimportant as to be ignored altogether. Within the family a sort of primitive communism exists, so that even though there may be a division of labor among the members, there is practically no trading or bartering among them. In the larger industrial society, however, unless it is organized also on a communistic basis, there is a great deal of trading, bartering, and exchanging. Therefore exchange has come to be one of the most important departments of the subject of public economics or political economy. Our whole system of trading, transporting, and merchandising is a necessary part of an industrial system which is characterized by the division and specialization of labor.

Valuation a part of exchange. An important part of this intricate system of exchange is the process of evaluating goods and services. It would be difficult to do very much exchanging without beginning to think in terms of value. In fact, even in the simplest case of barter, as when boys swap marbles, each barterer in his mind compares the desirability of the objects that are to be exchanged. To compare the desirability of the

objects is to think in terms of value. In its original and individual sense the value of a thing was the esteem in which it was held; in a somewhat more highly developed, or social, sense the value of a thing was the esteem in which it was held by all those who were interested in it. When men in considerable numbers were evaluating and comparing the same group of commodities and exchanging them a market was said to exist. Where a market existed for an object its value was the esteem shown for it on the market. The sign, or symptom, of that esteem is the fact that men were making sacrifices in order to get the object; that is, they were either laboring to get it or they were giving up other desirable things in exchange for it.

Value in exchange. This willingness to give something—either labor or another desirable object—in exchange for a thing has finally come to be regarded by most writers as the value of the thing, instead of being, as originally, regarded merely as the sign, or symptom, of the esteem in which it was held. A brief but satisfactory definition of market value, or of value as it is understood on the market and in commercial circles, is "power in exchange." Under this definition the value of an article is the power which it confers upon its owner to command other desirable things in peaceful and voluntary exchange. There has come, therefore, a change in the popular meaning of the word "value." In modern usage the esteem in which the object is held or the desire which is felt for it is that which gives it value instead of being the value itself.

When value is defined as "power in exchange," it must not be confused with a mere ratio of exchange. A thing which confers upon its owner the power to command other things in peaceful and voluntary exchange has power or influence over the minds of men; it influences their choice and induces them to do things which they would not otherwise do. It may, in a physical sense, cause goods to move from one possessor to another. Within certain limits it exercises control, or at least influence, over motives. Of course, when things exchange against one another it must always happen that they exchange in certain

ratios, but the ratio is merely incidental and is not the essential characteristic of value. The weights of any two objects must bear some ratio to each other, but it would be a mistake to say that weight was in itself a mere ratio. It is equally wrong to say that value is a mere ratio.

To value is to esteem. The purchasing power, or value in exchange, of a specific object is not always proportional to the esteem which is felt for it or to the intensity of the desire for it. Among wanderers on a desert a small portion of water would be exceedingly precious, but if none of them had anything to give in exchange for it, it would not have much purchasing power or market value; that is, its owner would not realize very much from its sale. It would, however, be held in the very highest esteem; it would be intensely desired; it would have great power over human motives; men would go to any length to get it; and if they chanced to have many things to give in exchange for it, it would have great power in exchange. The situation of some thirsty men on a desert with nothing to give in exchange for water is, however, very unusual. In the ordinary market place men have something to give for whatever they desire most. The thing which is intensely desired, esteemed, or appreciated will, under such circumstances, always command many other desirable objects in peaceful and voluntary exchange. The tendency of later writers is to do away with the distinction between value in use and value in exchange. Value in use is nothing except utility, whereas value in exchange is simply value. There is, however, a very close connection between utility and value. Utility is sometimes defined as the power to satisfy a want or gratify a desire (in which case it is synonymous with desirability), but value is the power to command other desirable things in peaceful and voluntary exchange. Value depends upon desirability, since nothing could have value unless it had the power to satisfy a desire of some kind. In other words, nobody would give anything in peaceful and voluntary exchange for the article in question unless he desired it. On the other hand, however intensely he might

desire it, if he had nothing to give in exchange for it, and everyone else were in the same condition, it would not have much power in exchange. The water in the foregoing illustration would have great utility and desirability but no great value,—certainly no great market value.

Censorious criticisms upon market value. There is, however, still another sense in which both "value" and "utility" are sometimes used. One who has strong ideas on the subject will sometimes assert that a given commodity is "really worth" very little, even though everybody seems to desire it and to be paying a high price for it, or that it is "really worth" a great deal, even though no one else seems to esteem it or to be willing to pay much for it. In this case the speaker is passing judgment upon the desires of the people. His judgment may be sound and that of the multitude unsound, or vice versa. There are, however, always those who have ideas on the subject of "real" value or utility as opposed to the popular idea of value or utility. Their idea of "real" utility is the power to satisfy a commendable desire, whereas economic writers have generally, though not universally, defined utility as the power to satisfy any sort of desire. There could be no possible objection to defining desirability in that way.

Distinction between value and price. Value should also be distinguished from price. The price of an article, as has been explained many times by economists, is merely its value expressed in terms of some single commodity which the community has generally agreed upon as the measure of value and the medium of exchange. This commodity is usually money. Whenever the word "price" is used nowadays, if it is used properly, it means value expressed in money, or the amount of money which will be given in exchange for a certain article. Wherever the word "value" is used, at least in connection with the general conditions of the market, it means its general power in exchange against other articles, of which money is only one. The cheapening of money tends to create a general rise in prices but not a general rise in values.

To summarize, the economic value of an object is variously defined as

1. Its price; that is, the amount of money for which it sells (wrong)
2. Its utility (inaccurate), which may mean either
   a. Its power to satisfy any desire, or
   b. Its power to satisfy a commendable desire
3. Its power to increase well-being (inaccurate) of
   a. An individual, or
   b. The nation
4. Its power over human motives (correct):
   a. Causing men to exert themselves in order to get it, and
   b. Causing men to give other desirable things in exchange for it, because of
      (1) The intensity of their desire for it, and
      (2) The abundance of other desirable things in their possession

Value is power in exchange. Since we are here concerned with the general problem of exchange and market value in the civilization of which we are a part and under the conditions in which we have to make our living, the last of these four definitions will be used in this chapter. In this sense value is "power," it causes bodies to move; that is, it causes men to exert themselves and causes things to move from one owner to another. It is, however, power over human motives and not mechanical power. We may therefore accept "power in exchange" as a good working definition of market value, or value as it is used on the market and in our general system of exchange. Under this definition several questions will at once arise. One of these is, Why do some things possess this power and others not? Another is, Why do some things possess more of it than others? Or, again, Why does the same thing possess more of it at one time or place than at another?

Value attaches to concrete things. Not much headway can be made in answering any of these questions until we clear the way by certain necessary explanations. Some of these explanations can be understood only after some very hard and clear thinking. In the first place, we must distinguish between

things in general and concrete units. It is one thing to speak of the value of bread in general; it is another thing to speak of the value of a loaf of bread. It is one thing to speak of the value, or the lack of value, of air in general, and another thing to speak of the value, or lack of value, of a given cubic yard of air. If one will look around and see what is going on, one will notice that men are not exchanging things in general, but only concrete units or quantities of things; not wheat in general, but a given number of bushels of wheat of a given grade; not money in general, but a given number of dollars, francs, or pounds; and even if air or water were exchanged, it would not be air or water in general, but some cubic yards or gallons in definite numbers.

This distinction between things in general and concrete units or quantities will eliminate forever the confusion that sometimes results when that distinction is not made. For example, we are sometimes told that air is of immeasurable utility, and yet it has no power in exchange. If a man will think, however, not of air in general but of a definite cubic yard of air which may be boxed up (it might even be offered for sale), and then if he will ask himself how much he cares for that particular cubic yard of air or how much use it is to him, he will find that he does not care for it at all or that it is of no use to him whatever. If it were of any use to him (that is, if he would be any better off with it than without it) he would be willing to give something in exchange for it; it would then possess value, or power in exchange.

Total utility and final, or marginal, utility. In other words, there are two distinct ideas of utility: one is total utility, and the other is sometimes called specific, sometimes final, and sometimes marginal utility. We gain an impression of the total utility of air when we think what would happen to us if all the air in existence were suddenly annihilated or if we, individually, were shut off from access to air. From this point of view the total utility of air is incalculable. But if we were to consider

what would happen if a definite cubic yard were annihilated or if we were shut off from access to it, we get a very different impression. As a matter of fact, it would make no difference to anybody, because there would be enough left to satisfy completely every desire for air.

In this world of adjustment, improvement, and progress, or of maladjustment and retrogression, the problem of having more or of having less of various things is always the important problem. How desirable is it that there should be more air than there is, or how undesirable is it that there should be less air than there is? Apparently this is a matter of indifference when one is out of doors. In certain close rooms it becomes a matter of importance, and air has some value in these cases. It is for this reason that in a practical, workaday world, where we are trying to improve our condition or to prevent it from becoming worse, we place a value on only those things which we desire to see increased. No social utility would be promoted by increasing the supply of air in any outdoor situation or by offering a price for increasing it. There is, therefore, no social or individual reason why it should possess any value or any power in exchange. On the other hand, if you think of an article of which you can say that you would be better off if you had a little more of it, or worse off if you had a little less than you have, you have a perfectly good individual reason for increasing your possession. Or if the community can say that it would be better off if it had more of it, or worse off if it had less, then the community would have a perfectly good reason for desiring to increase the supply. This is the case with everything which has value.

The functional theory of value. A moral philosopher might conclude otherwise; that is, he might think that the desires of the people were vicious and that they would be worse off if they had more of a certain article, whereas they themselves think they would be better off if they had more of it. It is the desires of the multitude rather than the conclusions of the moral

philosopher which determine market value. This may be called a functional theory of value. The function of value in a society is to induce producers to produce. It is a symptom that more of the article possessing value is wanted. It is, at the same time, a means of getting more; that is, if people will offer desirable things in exchange for an object someone may be persuaded to produce it.

CHAPTER XXV

WHAT DETERMINES THE VALUE OF A THING

Commodities and specific units thereof. We saw in the last chapter that a definite, concrete thing, such as a loaf of bread or an egg, has value only because someone desires it, and that a general commodity, such as bread or eggs, has value only because someone desires more of it than he possesses. We saw also that in either case the more intense the desire for the thing or the commodity, the more value it will have, provided those who desire it have something to give in exchange for it or are able to exert themselves in the way of getting it.

The next question is, What determines how intensely a concrete thing is desired or how intensely the people desire more of a commodity than they possess? It is obvious that something depends upon how much of the commodity they already possess. If everyone not only has quite enough for the present but foresees no scarcity in the future, it is obvious that he will have no desire for more of the commodity, nor would he have any desire for any concrete unit of it that you might offer him. If everyone is in that situation, no one will give anything in exchange for it. If, however, everyone has almost enough or thinks that he will always have almost enough of the commodity in question, his desire for more will not be very intense, nor will he give very much in exchange for it. But if he lacks a great deal of having enough or thinks that he is likely to lack it, he will give a great deal to get a little more. In this case each unit of the commodity will have high value. In short, the abundance or scarcity of a commodity has a great deal to do in determining the intensity with which each unit of it is desired and with its power in exchange.

Demand and supply. The foregoing remarks are only another way of saying that the value of a commodity is determined by the demand for it and the supply of it. This is well known as the law of demand and supply. This law, however, is not a mere convention of the market; it is based upon certain physical and physiological facts, which are as true under one system of society as under another.

First, let us understand how it works on an ordinary market; that is, where a number of buyers desire to buy, and different sellers desire to sell, varying quantities of the same commodity. Not all the buyers are equally anxious to buy, nor do they all have equal quantities of other goods to give in exchange. Therefore they will not all be willing to pay the same price for equal quantities of the commodity in question. Let us assume, for the sake of an illustration, that there are eleven possible buyers ready to buy at as many different prices. One is willing to pay, let us say, as high as a dollar for a pound of the commodity if he cannot get it more cheaply. Another is willing to pay ninety-five cents, another ninety, another eighty-five, and so on, the eleventh not being willing to pay more than fifty cents. The prices at which these buyers are willing to buy are listed in the following table, under what is called the "demand schedule."

Demand Schedule	Supply Schedule
1st buyer would pay $1.00	$0.50 is 1st seller's lowest price
2d buyer would pay $0.95	$0.55 is 2d seller's lowest price
3d buyer would pay $0.90	$0.60 is 3d seller's lowest price
4th buyer would pay $0.85	$0.65 is 4th seller's lowest price
5th buyer would pay $0.80	$0.70 is 5th seller's lowest price
6th buyer would pay $0.75	$0.75 is 6th seller's lowest price
7th buyer would pay $0.70	$0.80 is 7th seller's lowest price
8th buyer would pay $0.65	$0.85 is 8th seller's lowest price
9th buyer would pay $0.60	$0.90 is 9th seller's lowest price
10th buyer would pay $0.55	$0.95 is 10th seller's lowest price
11th buyer would pay $0.50	$1.00 is 11th seller's lowest price

In order to simplify our illustration let us assume an equal number of sellers on the market, no two of whom are equally

anxious to sell. The different prices at which we may assume that they would be willing to sell are listed above under what is called the "supply schedule."

Under certain special circumstances which would be hard to reproduce, eleven units of the commodity might conceivably be transferred. If the first buyer, not knowing that he could do better, should meet with the eleventh seller they could do business; and if the second buyer in the list, under the same conditions, should meet the tenth seller, the third buyer the ninth seller, and so on, every buyer might buy and every seller sell one unit of the commodity. In this case, however, each unit sold would sell at a different price.

On an open market, however, where each one knew what the other was doing, this would be impossible. There is a general tendency for each unit of the same grade and quality to sell at the same price at the same time and place. If such a uniform price were established on the market the case would be very different.

If the reader will study the two schedules and try to find a uniform price that will permit the largest number of sales to be made, he will find that the maximum number is six. If the price is fixed at one dollar it is obvious that only one sale can be made, for, though eleven sellers would sell at that price, only one buyer would buy. If the price were fixed at ninety-five cents two sales could be made. There would be ten sellers, but only two buyers. At seventy-five cents, however, there would be six sellers and six buyers. At seventy cents there would be seven buyers, but only five sellers. In short, seventy-five cents would be the price at which the maximum business could be done. If the price fixer desired to facilitate business and make the most of the situation, that would be the best he could do.

In assuming a uniform price for all units of the commodity that are sold we are not departing very far from actual practices.

The first law of the market. The first law of the market is that things of the same kind and quality tend to have the same value at the same time and place. That is to say, at any given

time and place, if there are a large number of units, all exactly alike and equally desirable, they will all tend to sell at the same price and have the same power in exchange. If they are unlike, some of them being more desirable than others, of course some will have more power in exchange than the others. Again, the values may, on a feverish market, change from minute to minute; that is, so rapidly as to create the illusion of selling at different prices at the same time. Or, again, in different portions of the same market similar things sometimes sell at different prices. The tendency, however, is toward a uniform price at the same time and place. Where a commodity has become standardized so that there are many units that are equally desirable, it has become customary to buy the article by quantity without taking the trouble to pick out the specific units desired. Wheat, coal, cotton, pig iron, and many other commodities are so graded and standardized as to sell in this way. On the other hand, there are a great many commodities that are not easily standardized. In these cases the purchaser will usually insist on picking out the individual units which he desires. Race horses, dwelling-houses, farms, building-lots, and a multitude of other things will probably always have to be bought and sold in this way.

Two reasons why a thing may not be wanted. If we agree that a thing will not have any value unless someone happens to desire it the next question is, Why are some things desired and others not? And why are some desired more than others? There are two primary reasons why an article may not be desired at all. In the first place, it may possess no total utility; that is, there may be no use to which it can be put, so far as anyone knows. There are not, however, very many such things. The other reason is that there are so many other things just like the one in question as to more than satisfy the desire. Where water is very scarce the desire for it becomes intense; where it is abundant the desire is completely satiated, so that if a specific barrel or gallon of water were offered for sale, no one would desire it at all. In such a situation water would have as

little value as though there were no possible use to which it could be put.

One might go even farther and name articles which, though capable of satisfying desires or of being put to important uses, have yet become worse than worthless; that is, have become nuisances through their overabundance. Many of the weeds which infest our fields belong in this class. Water in a swampy region also comes to possess a negative value (that is, men will go to considerable expense to get rid of a part of it), and yet it may be perfectly good water, capable of contributing not only to human life but to plant and animal life as well. Rabbits in Australia and English sparrows in America will serve as further illustrations.

A commodity has value only when there is not enough of it. We therefore reach the general conclusion that an article (that is, a definite object, such as may be bought and sold) has value only when it is wanted, and that it is wanted only when there are not enough objects like it to satisfy the desire for it. If there are so many others like it that the desire is completely satiated the object in question will not be wanted at all, and that holds true of each and every one considered singly. But if there are not enough to go round and satisfy everybody, each and every such object will be desired and will consequently have a value.

Following the same line of reasoning, we may reach the further conclusion that an object has much value when it is much desired; it has little value when it is not much desired. Its power in exchange as compared with other things will depend on how intensely it is desired in comparison with other things.

Physiological basis of the law of demand and supply. The great law of supply and demand is thus seen to have a physiological and psychological basis. The expression "supply and demand" is merely a formula; back of this formula there is the physiological fact pointed out in Chapter II. Every desire is satiable, and the more nearly the desire approaches the state of complete satiation, the less intense it becomes. Thus the reason

that any superabundant article under ordinary circumstances has no value is because it is so abundant that every desire is completely satiated. That is the reason why water has little or no value in a well-watered country. Wherever it is so scarce that the desire for it is not completely satiated, as is the case in an arid climate where people are trying to farm, it has a value. It is the physiological or psychological state of the desire which furnishes the real basis for the law of supply and demand. With a given demand, the greater the supply the more nearly all desires will approach the point of satiation, and the more indifferent everyone's attitude toward the object becomes; on the other hand, the smaller the supply, the more intense the desire for each unit of that supply, and the more anxious men are to get it.

As there are two reasons mentioned above why an object may not be desired at all, there are also two similar reasons why the desire for it may be one of little intensity. In the first place, the possible uses to which the object may be put may be of very little consequence to anybody; it may gratify a mere whim or caprice. In the second place, the supply may be so great that the desire is almost completely satisfied, and in this case no one will care very much about getting more than he has, nor will anyone give very much to get more. Under either set of circumstances no one gains very much in the way of satisfaction or well-being if some producer adds to the supply; no one loses very much if some destroyer subtracts from the supply. This may seem very simple, but it is one of the most important considerations in the whole field of economics; for the same law of value, as we shall see when we take up the study of distribution, applies to the labor of men as well as to material commodities. There are the same fundamental principles underlying the law of supply and demand in one case as in the other.

The relation of utility to value. When we say that an object has value only when it is wanted we are virtually saying that it has value only when it has utility, for utility is by definition the power to satisfy a want or a desire. Whether that want be

physiological (like hunger) or whimsical (like the desire for the latest novelty) does not affect the case in the ordinary economic sense. Economists have generally refrained from passing moral judgment on the quality of desires, though there is a tendency to depart from this tradition. If the gratification of a vicious desire does harm in the long run, it tends to destroy the well-being and prosperity of the community. This is a consideration of great economic importance. The tendency, however, in a democratic society, has been to assume that whatever the people happen to like, it is their affair and not the affair of the economist or the moral philosopher. If there is a popular demand for a cheap and tawdry article or for demagogical politics, there would seem to be equally good reasons in either case for saying that the people should have what they like. To set oneself up as a moral censor, to pass judgment on the desires of the people either in commercial or in political affairs, has generally been considered undemocratic. Under the impulse of this rather extreme ideal of democracy, utility has been defined, as stated above, as the power to satisfy desires, whether they be good, bad, or indifferent. Any object, therefore, which possesses utility, or the power to satisfy a desire, possesses one of the essential factors in value.

Meaning of scarcity. When we say that an article has value only when the desire for it is left unsatisfied we are virtually saying that it has value only when it is scarce. Scarcity is by definition insufficiency to satisfy desires. A thing may be rare without being scarce; that is to say, however little there may be of a certain article, if that little is more than sufficient to satisfy all desires, the article can hardly be said to be scarce. Flies in the winter time may be rare, but they are not scarce in the technical economic sense, since even then there are more than are wanted. Speaking absolutely, there may be more grass than weeds on a given farm, but, relatively to the farmer's desires, grass may be scarce while weeds are superabundant. If we assume that the article in question is appropriable, or capable of being possessed and enjoyed, and not, like the moon,

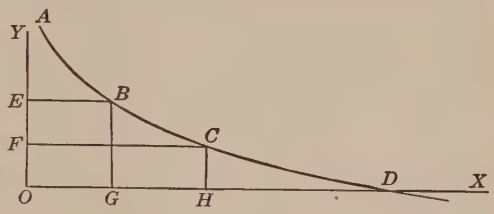
entirely beyond our reach, we may say that anything which possesses both utility and scarcity will have power in exchange, and nothing else whatsoever will have that power.

The utility of an article is the basis of the demand for it; the scarcity of the article is the measurable limit of its supply. Every boy knows that the first apple which he eats at any one time tastes better than the second, provided they are alike, and the second better than the third, and so on. He knows also that, however capacious his appetite, if the supply of apples holds out he will ultimately reach a point where he doesn't care for any more; in other words, he will reach the point of complete satiation so far as apples are concerned. When this point is reached, apples have lost their utility for him and he becomes indifferent to them. He may still be willing to give something in exchange for them in anticipation of tomorrow's hunger, but if he has a supply sufficient to satisfy not only present but future desires, he becomes absolutely indifferent and gives nothing in exchange for them.

Social value. We now approach a secondary phase of the law of value. Even though a boy's own desire for apples may be completely satiated, not only in the present but in the anticipated future, his commercial instinct may prompt him to prize them, not because he himself desires to consume them but because he can trade them to someone else for objects which he himself desires. At this stage he has arrived at the point where he begins to take account of social utility as well as of individual utility. If he perceives that there is in society around him an unsatisfied desire for apples, he may make use of that unsatisfied desire to acquire desirable things in exchange for his own surplus apples. This power (that is, power in exchange) which commodities possess on the market he is able to make use of to his own advantage. Thus we see a great many men producing articles far in excess of their own needs because they know that these articles are exchangeable for other things which they need. We see a considerable body of men doing nothing except to trade in objects of general social desire. But the laws which

govern social valuation are fundamentally the same as those which govern individual valuation. There must be somebody in the community who has less of the object than he wants; otherwise neither the producer nor the trader would be able to exchange the object for other desirable things.

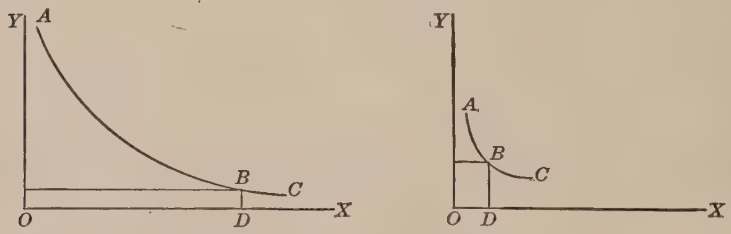
Diminishing utility. Desire and utility are reverse aspects of the same thing. The desire exists in the human being and is that which the object of the desire is capable of satisfying. Utility exists in the object outside the human being and is that which is capable of satisfying his desire. In proportion as the human being's desire is capable of being satisfied, in that proportion does the utility of the object which satisfies that desire diminish as its quantity increases. This diminishing utility of a desirable object is sometimes illustrated by means of a diagram, of which the above will serve as a sample.



Let us measure the quantity of a certain commodity along the line *OX*, and the intensity of the desire for it along the line *OY*. When the quantity is represented, for example, by the line *OG*, each unit is desired with an intensity represented by the line *OE*; and when the quantity is represented by the line *OH*, the desire is so well satisfied that the intensity of the desire is now represented by the line *OF*. If the quantity were to increase until it was represented by the line *OD*, all desires would be satiated; that is, the desire for any particular unit of the supply would have no intensity,—there would be no desire left. And, finally, if the quantity were to increase still further, the commodity might be considered as a nuisance, and men might begin to desire to have less of it rather than more. The curve *ABCD* becomes the utility curve according to the assumptions. Just what shape this curve would take in any individual case

would be hard to determine. One thing, however, is certain (and this is the really essential thing), that, whatever its shape, it is a descending curve. Its distance from the line *OX* diminishes as we approach the point *D*. That is as certain as that a desire is satiable. Therefore we are safe in using a descending curve to illustrate the decline in the intensity of the desire for a commodity as the quantity of the commodity increases in proportion to the number of people who desire it.

The total utility of the commodity is represented by the surface bounded by the lines *OX*, *OY*, and the curve *ABCD*. Its marginal utility (that is, the effective utility of any single unit of the supply) is represented by the line *OE* or *BG* when the quantity is *OG*, and by the line *OF* or *CH* when the supply is *OH*.



If now we consider two commodities whose quantities and utilities are represented by the two diagrams above, we shall see how the relative intensity of the desires for the two commodities will affect their relative values.

Let us assume that the curves *ABC* in the two diagrams represent the diminishing intensity of the desire for potatoes and oranges respectively, and the line *OD* in each diagram the available quantity of each commodity. The quantity of potatoes being so much larger than that of oranges, the desire for them is much more nearly satiated than is the desire for oranges, though the total utility of potatoes is much greater; that is to say, a pound of potatoes out of the total supply is very slightly esteemed or desired, whereas an equal quantity of oranges out of the much smaller supply is more highly esteemed

or desired. Under these circumstances a pound of oranges would have as much power in exchange as several pounds of potatoes; that is, oranges are more valuable than potatoes.

By increasing the number of diagrams the relative power in exchange of a number of commodities could be illustrated in the same way. That, however, would introduce no new principle, but would only complicate matters.

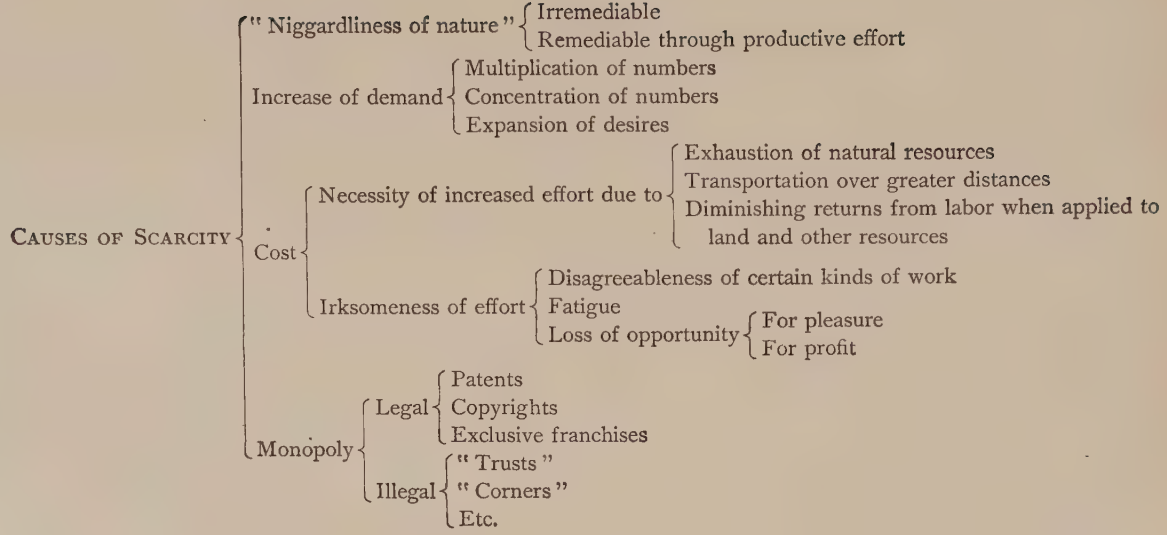
CHAPTER XXVI

SCARCITY

Causes of scarcity. It was shown in the last chapter that commodities must be both desirable and scarce in order to possess value. We have now to inquire why such things are scarce. There are four reasons which come within the limits of our comprehension. These we may call (1) "the niggardliness of nature," (2) the expansion of desires, (3) the cost of production, and (4) monopoly.

"Niggardliness of nature." When the term "niggardliness of nature" is used, it is not intended to cast reflections upon nature nor to imply that she is not bounteous in many respects. It is merely to call attention to a fact which cannot well be disputed; namely, that in many places men have congregated in numbers greater than nature has there provided for. Desirable things are scarce in those places at least, and it is at least necessary to bring supplies from other places where there is a surplus. Moreover, there are many things which we desire which nature does not supply at all in the form in which we desire them, though she supplies the raw materials out of which we may make them. Again, some things which we desire can be produced only at certain times and seasons. They must therefore be preserved and kept for other times when they will be needed.

Expansion of desires. The fact that nature does not supply us with everything we desire in the exact forms and at the exact times and places when and where we happen to desire them may be in part due to the fact that we desire more refined products than grow in a natural state, or to the fact that great numbers of us choose to live in places where such products do not grow in sufficient abundance. It is only a symptom of the


Causes of Scarcity
"Niggardliness of nature"
Irremediable
Remediable through productive effort
Increase of demand
Multiplication of numbers
Concentration of numbers
Expansion of desires
Cost
Necessity of increased effort due to
Exhaustion of natural resources
Transportation over greater distances
Diminishing returns from labor when applied to land and other resources
Irksomeness of effort
Disagreeableness of certain kinds of work
Fatigue
Loss of opportunity
For pleasure
For profit
Monopoly
Legal
Patents
Copyrights
Exclusive franchises
Illegal
"Trusts"
"Corners"
Etc.

maladjustment between man and nature. It is not necessarily the fault of either man or nature; it is simply a fact of experience, and we must make the best of it. There is, however, a marked tendency for human desires to expand. "When goods increase, they are increased that eat them." In the language of the day, "The richer we get, the more we want." Therefore we must expect an indefinite continuation of the condition wherein some desirable things are insufficient in quantity to satisfy everybody. We shall therefore continue trying to increase the supply of desirable things in the forms in which they are wanted and at the times when and the places where they are wanted. This is called the production of utilities, or, more properly, the adding of utilities to material things,—form utility, time utility, and place utility.

Cost. If the efforts which we have to make in order to produce utilities were altogether pleasant and not in the least degree unpleasant or disagreeable, there is no reason why most things might not be produced in such abundance as to satisfy everybody completely. Some things, of course, cannot be increased by any human effort. Meteoric iron has long served as an illustration. Autographs of distinguished men of the past, the paintings of old masters, first editions of books, and a number of other illustrations might be given. But if we are speaking of an ordinary reproducible commodity we are safe in saying that unless there were some difficulty in the way of indefinite reproduction,—some unpleasantness, irksomeness, or fatigue connected with its production,—its supply would certainly increase until everyone had all he wanted of it.

Effort not always irksome. Illustrations are not hard to find of desirable commodities which have to be secured by human effort, but which, because the effort is pleasant rather than unpleasant, become so abundant as to command no price. Trout are generally regarded as a delicacy and are greatly desired. They can only be caught by considerable muscular effort and by the exercise of great patience and skill. And yet, in certain communities where the demand is not very great and the fishing

not too arduous, trout are caught for sport in such numbers as to supply the neighborhood. They become free goods and are given to those who desire them without money and without price. If there were more consumers, or fewer persons who enjoyed the sport of fishing, there would not be enough to go around. Those who did not get as many as they desired would then be willing to pay a price in order to get more. In other neighborhoods flowers are grown for pleasure. The demand not being very great, and there being a number of people who enjoy gardening, there is such an abundance that everyone is supplied free of charge. Poultry-raising is a pleasure to many people if they do not have to work too hard at it. In most neighborhoods, however, there is a demand for eggs and poultry that cannot be completely satisfied with the products of those who keep poultry for the pleasure of it. In order to induce these to produce more than is pleasurable and to induce others to do the work who do not enjoy it at all a price must be paid. The price is paid, virtually, to overcome the disinclination of producers.

Cost is disinclination. All the reproducible products which sell on the market and which are not monopolized are limited in supply by some form of disinclination or reluctance to carry on the work of production. This disinclination may resemble that which one finds in the average fisherman, gardener, or poultry-keeper, to whom the work in small doses is not irksome, or it may be of a different sort altogether. In the case of the fisherman, the gardener, and the poultry-keeper, their work may be pleasant rather than unpleasant up to a certain point. Almost anyone likes a certain amount of this kind of work, though some of us are easily satisfied. Beyond that point such work becomes irksome and fatiguing, and we keep at it only on condition that someone pays us for it. Up to that point it was play; beyond that point it literally becomes work.

Opportunity cost. Where two kinds of work are pleasurable and one has to choose between them, the fact that one has to surrender the one form of pleasure in order to pursue the other

introduces an element of cost or sacrifice. It is reported of a certain man that he was passionately fond of gardening, but could never stick to it because as soon as he began to dig he found worms, and they reminded him of fishing, of which he was even fonder than of gardening, which then became irksome.

In other cases the work is disagreeable from the very start. There is no element of play in it. No one will do any of it unless he is paid for it. In still other cases the work itself would be pleasurable rather than disagreeable up to a certain point, if it were not for the fact that there is something else that one would rather be doing. A boy might not ordinarily mind working in the garden, but when there is a circus in town or a ball game going on, gardening suffers in his estimation by comparison with these other opportunities. Whenever we have to work long hours, there are pretty certain to be many other and more pleasurable things which we would rather do. Having to give up these other opportunities would make our work irksome even if it were not so of itself.

The resistance which has to be overcome in order to get men to work. Cost, or cost of production, is the general name which we apply to the resistance which has to be overcome in order to get a thing produced. The real resistance is the resistance of the human will, as shown by the fact that even though physical effort has to be put forth, so long as the effort is pleasurable it does not have to be paid for. As soon as it becomes irksome it has to be paid for. It is a matter of choice, and the price paid is a means of influencing choice. The irksomeness of the effort causes men to choose against putting forth the effort; the price paid for the article causes them to choose in favor of it. Such words as "irksome," "unpleasant," or "diasagreeable" describe certain efforts as they appeal to the mind. The words "disinclination" and "reluctance" describe the attitude of the mind toward the effort which men would not be willing to make unless they were rewarded for it.

Distinction between play and work. The difference between play and work is found just here. Play is effort of both mind

and body which is put forth for the sheer pleasure of the effort itself. Work is effort which is put forth for the sake of a reward which is detachable from the effort or the action. Under very favorable circumstances all necessary effort might conceivably take the form of play, and in that case there would be no such thing as cost of production. A community made up of people with very simple habits and very strenuous natures, and in a very favorable environment, might possibly reach such a delectable state. Having very simple habits, the inhabitants of this community would be able to get the greater part of their higher satisfactions out of those things whereof nature is bounteous, such as the sky, the clouds, the verdure, and pleasant company. Living in a very favorable environment they could produce such things as had to be produced with little effort. Having very strenuous natures, abounding in energy and delighting in effort, they could do the necessary work of production without any disinclination or reluctance. This, however, would be a kind of earthly paradise which we may dream about but are not likely to realize.

Kinds of cost. When we say that the price of an article has to be high enough to cover the cost of production, we really mean that it has to be high enough to overcome the disinclination of men to do whatever is necessary in order to produce it. This disinclination or cost is of various kinds and degrees. Mention has been made of those operations which are inherently disagreeable from the very start. This may be called disutility or pain cost. In other cases there is no disinclination until the work has been carried so far as to produce a sense of fatigue. This may be called fatigue cost. Again, the disinclination may be due to the fact that the work in question prevents us from doing something else which we would rather be doing. This is called opportunity cost. Opportunity cost arises whenever, in order to do a certain thing, one must give up the doing of something else which would be advantageous or pleasurable to oneself. The advantage which one gives up may be of two kinds: it may be pleasurable in itself (that is, it may

be play or amusement) or it may consist in the opportunity to earn money at some other job. In either case one must be paid for doing the thing in question, even though it is neither painful nor fatiguing; otherwise one will avail oneself of another advantageous opportunity.

Pain cost. Of these three forms of cost, pain cost is, in our day, the least important. In a rude society, when conditions were hard and enemies numerous, it may have been different. Nowadays, outside of a few dirty, dangerous, or otherwise disagreeable occupations, there is comparatively little work which is disagreeable in itself. When hours are long work is often fatiguing and irksome for that reason. But as prosperity and well-being increase and general social conditions improve, opportunity cost comes to play a more and more important part. The possession of high wages or a large income creates opportunities for amusement or pleasure which otherwise would not exist. One then finds long hours more irksome than they would otherwise be, not because they are more fatiguing but because they deprive one of those opportunities for pleasure which one's larger income enables one to enjoy. A well-educated man has more opportunity for the pleasurable exercise of his faculties than an uneducated man; therefore he needs more time in which to do these pleasurable things. If his services are desired he must generally be paid more in order to induce him to give up these other opportunities. Far more important than that, however, is the fact that a well-trained man has many more opportunities to earn money than an untrained man. Among these opportunities he will choose only the one which he likes best. Whoever desires his services or his products must therefore bid against all other opportunities which lie before the trained man. Work is not more painful or more fatiguing to the trained man than to the untrained man, but his labor costs more because of the opportunities which he gives up when he decides to do a certain kind of work.

Increasing cost. As population increases or concentrates in certain areas, the natural resources of those areas must either

be worked more intensively or else the means of subsistence as well as the raw materials of industry must be brought from greater distances. To bring them from greater distances obviously requires greater effort unless new and improved methods of transportation are invented. Even with the best methods attainable it costs more to haul longer than to haul shorter distances. To work mines harder tends to exhaust them more rapidly. It is also possible to work land so intensively as to exhaust the soil unless great care is taken to put back in the soil as much plant food as is used up by the crops which are taken off. To exhaust either the mines or the soil will obviously make greater and greater efforts necessary if a large population is to be provided for on the same scale as before the exhaustion took place. Poorer mines must be worked and crops must be grown on poorer soil, where more effort is required to get the same crop.

Diminishing returns and increasing cost. Entirely apart from the exhaustion of the soil, however, is the great law of diminishing returns from land. This law, which is one phase of the universal law of variable proportions, will be discussed in detail in a chapter devoted to that subject (see Chapter XXXIII). For our present purpose it is only necessary to state and define the law.

It is a well-known fact that land yields more per acre under intensive than under extensive cultivation. By intensive cultivation is meant the application of considerable quantities of labor and capital to each unit of land; by extensive cultivation is meant the application of smaller quantities of labor and capital. While land can be made to yield more when large than when small quantities of labor and capital are used in its cultivation, still there are limits to this rule. In the cultivation of any particular crop there comes a point beyond which it does not seem possible, by any amount of labor, care, or cultivation, to increase the yield appreciably. Long before this point is reached, however, there is a tendency for the land to yield less in proportion to the labor and capital employed, even though it

continues to yield slightly more per acre with each increased application of labor and capital to its cultivation.

As a result of this law more effort is required to get from the soil of a given area subsistence for a large than for a small population. Rather than incur the increasing cost of production which would be necessary if an increasing population should attempt to get its subsistence from the same soil, men have uniformly chosen to spread their cultivation over wider areas (thereby incurring increased cost in transportation) or they have resorted to inferior soils within the boundaries of the original area, or they have done both. There is no good reason in the world why they should ever have done either of these things except that which is furnished by the law of diminishing returns. If they could have doubled, trebled, and quadrupled the production on the original area of good soil by merely doubling, trebling, and quadrupling the labor and capital used in its cultivation, there would never have been any reason for extending their cultivation. But when they found that by doubling the labor and capital they did not double the yield, even though the yield did increase somewhat, then they had an excellent reason for extending the area of cultivation.

We have, therefore, several reasons why increasing effort is necessary to get increasing supplies for an increasing population. The law of diminishing returns is one; the tendency toward the exhaustion of the soil, mines, and other natural resources is another; the necessity of cultivating inferior soils is another; and that of transporting materials greater distances is still another. All of these, however, are closely joined together and mutually determine one another. Add to these the fact that increasing effort becomes increasingly irksome because of increasing fatigue and increasing opportunity cost, and we have what may be known as the law of increasing cost. This law of increasing cost, in turn, is the chief factor in limiting production and keeping the supply of various commodities so scarce as to give them a value.

Monopoly. Among the factors which tend to make commodities scarce nowadays, one of the most important is monopoly. A monopoly is an agency which has sufficient control over the supply of a given commodity to fix its price. Without this control over supply, any attempt to fix prices above that level which would pay the cost of production would merely tempt other producers to enter the field and take the market away from the would-be monopoly. A high price would stimulate the outside and independent producers to increase their output. Until the would-be monopoly is in a position to prevent anything of this kind, it has not won the unenviable privilege of being called a genuine monopoly. Any agency which has succeeded in getting control of the supply of a commodity has become a monopoly, or at least a partial monopoly, whether it likes to be called by that name or not. Aside from the government, probably no such thing as an absolute monopoly exists. A partial monopoly exists whenever an organization exercises sufficient control over the supply of anything to enable it to fix its prices, even within a narrow zone, independently of competition. This means that the power of a partial monopoly over prices is not absolute. It may fix the price somewhat higher, but not much higher, than competition would fix it. Where a monopoly is not absolute, if it attempts to fix prices outside these limits it will create competition and destroy its power to control.

This control may be exercised in two ways: first the monopoly may decide upon the quantity to be produced and then sell that quantity for whatever it will bring on the market, allowing the law of demand and supply to fix the price; second, the monopoly may decide upon the price at which it will sell the product and then produce only as much as can be sold at that price. This is the method usually followed. In either case the supply is limited by the will of the monopoly and not by the cost of production. In a genuinely competitive industry the supply is limited by the cost of production. Producers will stop production rather than sell for any considerable time below the cost of production.

CHAPTER XXVII

MONEY

Money a labor-saving invention. One of the greatest of all labor-saving devices is money. If one will try to imagine the difficulties of carrying on exchange without the use of money (that is, by means of direct barter), one will easily understand how great a convenience money is. Of course, without the use of some kind of money we never could have developed our present highly specialized industrial system, under which each individual does that for which he is best fitted and exchanges his products or services for the products and services of other people who are likewise doing that for which they are best fitted. But even if we could imagine such an industrial system based on barter, the difficulties would seem almost insuperable. The tailor who had made a coat and desired bread in exchange might find difficulty in finding a baker who happened to want a coat; even if he found such a baker, it would be difficult for the tailor to carry home as much bread as the coat would be worth. By some kind of credit system, of course, the baker could credit him with a large number of loaves of bread, to be called for one at a time. The dairyman who had milk to sell would find it difficult to know how to collect payment for the very small quantities which he delivered to the butcher, the baker, the tailor, etc. These difficulties would be so great that in all probability there would be comparatively little exchange. The farmer would have to be his own butcher, tailor, and shoemaker. Each household, in fact, would have to be almost self-sufficing.

So important is the function of money in modern industrial society that some writers have seen fit to divide systems of economy into two fundamental types, known as the barter economy

and the money economy. Certain savage tribes who live in a state of primitive communism get along without much exchanging. Their limited commerce with the other tribes is carried on by means of barter; furs and other articles of their own production are exchanged for outside products which they desire. The introduction of money makes possible a great deal of exchanging within the tribe and is supposed to have marked one of the epochs in the economic development of civilized peoples.

Various substances which have served as money. Various commodities or articles have served the purpose of money. The early colonists in America found the Indians using a kind of currency known as wampum, or bead currency. The Hudson Bay Company and other companies that traded with the Indians of the interior developed a skin, or fur, currency, in which the skins of various animals were recognized as standards of value and exchanged at the ratios agreed upon. In ancient times various European peoples used cattle as currency. In the Homeric poems values are frequently quoted in terms of cattle. A very amusing and at the same time instructive illustration is given in a paper entitled "Rudimentary Society among Boys," by John Johnson, in the Johns Hopkins University Studies in History and Political Science, Second Series, No. 11. In this primitive boy society butter was used as money.

Butter and pie in boys' society. Commonly the primary object of the hunters is to obtain a handsome collection of curiosities, and to enjoy the satisfaction of possession along with the esteem inspired by success; but occasionally a boy hunts with a purely commercial end in view. I have been told of one who made a practice of exchanging all the eggs he found for the allowance of butter given to his companions at meals. This latter is dealt out to the boys in approximately equal portions of an ounce weight, and is frequently used by them as a means of exchange and measure of value. A flying squirrel has been known to bring fifteen "butters," and a sling, five "butters." The unit is subdivided once, the fractional piece being known as the "half-butter" and having a purchasing power about equal to that of one cent. Some boys who entered upon the manufac-

ture of taffy obtained the needed butter by buying it from the rest at the price of two cents for one "butter," payment being made, at the option of the seller, either in money or in taffy.

Their transactions are often so complicated that the boys find it desirable to lessen the number of payments of this novel currency, and they employ for this purpose a system of verbally transferring their claims from one to another, somewhat as merchants use negotiable notes. Perhaps A buys a knife from B for ten "butters." B has an outstanding debt of the same amount for marbles, and he transfers to his creditor C his claim against A, who pays to C or to anyone else whom C may designate.

At first glance this use of butter as money seems laughably odd; but in fact it could be easily paralleled by long lists of articles equally far removed from the gold, silver, and paper of our own currency, which have yet served as money in different parts of the world. The wampum of the early Indians is familiar to all readers, and Jevons and Roscher enumerate, among many other substances that have been so used, corn, wolfskins, whales' teeth, and straw mats. The former of these distinguished authors remarks that "it is entirely a question of degree what commodities will in any given state of society form the most convenient currency" and our boy-state being in a condition where butter served the purpose, its citizens adopted that commodity as their money.

Professor H. B. Adams added a footnote to the above, which reads as follows:

At Phillips Exeter Academy, New Hampshire, in my day, there was a pie currency in vogue among the boys who boarded in Abbot Hall. Pie was something of a luxury, for it was furnished by "Burnham," the steward, only twice a week. The idea of value in exchange was naturally connected with our Saturday and Sunday allowance of pie; in fact, there was a constant trading of different sorts of pie, a boy offering his mince or custard pie of one week for the apple or pumpkin pie that was to come the next week. Pie debts were, moreover, incurred in a variety of ways, chiefly for services rendered,—for example, by one's chum in making the fire on a cold morning, when it was not his turn, or by one student in aiding another in his lessons, etc. Boys would wager their pie sustenance for a week, and some-

times for a month, on a match game of ball. These young barbarians, at their ball play, used to rival the ancient Germans, who, as Tacitus describes, sometimes staked not only their property but their very freedom in games of chance. What could be greater recklessness for a hungry boy than to risk his pie for a month on the issue of a game of baseball? In ordinary transactions the unit of pie value at Exeter was the "piece," which was served us on a special plate; but there were as many standards of value as there were sorts of pie, so that in the settlement of a small debt of one or two "pieces," boys sometimes sought to pay their creditors in pie of an inferior or less marketable quality. Poor pie was like trade dollars. Sometimes a creditor would find himself with an embarrassment of riches. If his debtors insisted on paying off their obligations on one day in one sort of pie, he would be obliged to eat up all his perishable substance at once, or to dispose of it at a considerable sacrifice.

So great is the need for money in a society where there is any exchange of desirable articles that almost anything which is commonly used and appreciated may serve the purpose of money. Among primitive herdsmen, cattle meet the conditions. They are universally esteemed and appreciated, they are familiar objects whose value is generally understood, and they are easily transferable. They lack, however, certain other qualities which make modern metallic money convenient.

Qualities which the money material should possess. Jevons, in his "Money and the Mechanism of Exchange," names seven qualities which are desirable in the material of which money is made. They are, first, utility and value; second, portability; third, indestructibility; fourth, homogeneity; fifth, divisibility; sixth, stability; and, seventh, cognizability. Cattle possess only the first, second, and seventh of these qualities, and perhaps, to a slight degree, the sixth. That they are useful to primitive herdsmen is rather obvious. They furnish their own portability in that they can carry themselves about. They possess cognizability because all are familiar with them. There may be a fair degree of stability also in their value, though that is by no means certain. The skins of animals, used as money by hunting

tribes, possess the same qualities as cattle, but still lack the others which Jevons deems desirable. The "butters," as used in the rudimentary society mentioned above, seem to possess everything except indestructibility.

Precious metals especially adapted. It has been found that the precious metals, especially gold and silver, possess all these qualities in superior degree. If by utility we mean desirability, or the capacity to satisfy a desire, there is no doubt that gold and silver possess this quality. If we were to take a narrow and somewhat puritanical view of utility we might question this. They possess portability because there is considerable value in small bulk. This would not be true of the coarser metals. They possess indestructibility to a high degree; they do not corrode or rust as iron would. They possess homogeneity,—that is, gold of equal purity is essentially alike the world over; it may be easily standardized as to quality, so that one piece of metal may be equally desirable with every other piece of the same size and standard of fineness. They possess divisibility; that is, a piece of gold or silver may be divided into smaller pieces, and each of the smaller pieces will have value in proportion to its size. This would not be true of diamonds and precious stones, though these would possess portability and indestructibility in high degree. Gold and silver possess stability of value in a very peculiar sense. Over long periods of time they will fluctuate considerably, but over short periods of time (that is, from week to week, from day to day, from hour to hour) they will fluctuate very little; whereas other commodities, such as farm products, pig iron, and other articles which are dealt in largely, fluctuate rapidly over short periods of time.

Reasons for the stability of gold prices. One reason for the stability of the value of the precious metals over short periods is that the mass of gold or silver in existence at any one time is very large in proportion to the product of any given year. The total amount of wheat in existence at the present moment has practically all been produced within the last year, or two years at the outside. Of the total gold in existence a very small frac-

tion was produced within the last year or two. Suppose you had a large reservoir of water, fed by a very small pipe. If the flow through the small pipe were to vary considerably from day to day, it would make very little difference in the total quantity of the reservoir; though if the increase or decrease kept up for many years, there might be a considerable change in the quantity in the reservoir. This is analogous to the case of gold. The total quantity in existence is like the quantity of water in the reservoir; the total annual production is like the quantity which flows into the reservoir through a very small pipe. The case of wheat is like that of a small reservoir fed by a very large pipe. Any change in the quantity flowing through the pipe is likely to make a considerable change in the quantity in the reservoir. That is to say, a large crop of wheat in one year will make a great difference in the total quantity available for the world's supply. A crop failure, on the other hand, will make a considerable shortage in the world's supply. The value of wheat, therefore, fluctuates rapidly over short periods of time. Since it would take a number of years of excess production of gold to make an appreciable difference in the total quantity available for the world's supply, gold does not fluctuate much from day to day, from week to week, or even from year to year.

Since most of the transactions in which we use money are short-time rather than long-time transactions, it is more important that the money material be stable in value over short periods than that it be stable in value over long periods. Occasionally we invest our money in something which we expect to last a long time (in such cases we are interested in the stability of the value of money over long periods), but most of our purchases are made from day to day. The average business transaction has very little relation to long periods of time. This is one of the principal reasons why gold and silver serve the purpose of a money material better than most other products. In this respect gold has proved to be superior even to silver.

Cognizability. As to cognizability, the superiority of gold and silver over other materials is not so great. The expert can

always apply tests by means of which he can detect spurious coins, but the inexpert usually has to depend upon his eyes and his ears and his sense of touch. But there are not many other substances which cannot be adulterated or of which counterfeits may not be made. Gold and silver are not particularly wanting in cognizability, though they are not preëminently superior in this respect.

Convenience of handling. For certain minor coins, however, neither gold nor silver is well adapted. There is so much value in such small bulk in gold, for example, that one would need a magnifying glass and tools more delicate than the human fingers to handle gold coins of the value of our five-cent pieces and one-cent pieces. Mere physical convenience requires a coarser metal for these small values. Even the gold dollar, which once was coined in the United States, proved too small and inconvenient, and its coinage was therefore suspended. The forms of money now in existence in the United States are indicated in the following outline:

KINDS OF MONEY IN THE UNITED STATES

- Coin
  - Gold
    - Double eagle
    - Eagle
    - Half eagle
    - Quarter eagle
  - Silver
    - Dollar
    - Half dollar
    - Quarter
    - Dime
  - Nickel (five-cent piece)
  - Bronze (one-cent piece)
- Paper
  - Gold certificates
  - Silver certificates
  - Treasury notes
  - United States notes (greenbacks)
  - National bank notes
  - Federal Reserve notes
  - Federal Reserve Bank notes

The coins are sufficiently familiar to require no description. Their differences appeal readily to the eye. It is noticeable, however, that comparatively few people note carefully the different kinds of paper currency. Anyone who has coins in his pocket can tell you instantly to which class each coin belongs. Comparatively few people, however, can tell you about the different pieces of paper money in their pockets.

The first three forms of paper currency mentioned in the above outline may be called warehouse receipts. For the convenience of the people the Federal Treasury issues these receipts in return for deposits of other forms of money. If, for example, one has a large quantity of gold or silver coin and desires something more convenient, he may deposit the coin with the Secretary of the Treasury and receive in return gold or silver certificates. These merely certify that the coin has been deposited in the Treasury. These certificates then circulate as money. Gold certificates are issued against deposits of gold, and silver certificates against deposits of silver. A silver certificate, for example, reads: "This certifies that there have been deposited in the Treasury of the United States of America—— silver dollars, payable to the bearer on demand." The Treasury notes were issued in the purchase of silver bullion under an act authorizing such purchase. They have almost disappeared from circulation, having been redeemed by the coinage of the bullion for the purchase of which they were issued. The United States note, popularly known as the greenback, is issued by the Federal government as pure credit currency. It has on its face, among other things, "The United States will pay to the bearer ——dollars." The issue of these notes was authorized by act of Congress during the Civil War as a means of financing the war; that is, as a means of paying the obligations of the government. The amount then authorized, with only a slight reduction, has been kept in circulation ever since. The national bank notes are technically known as national currency. They are secured by United States bonds or other securities deposited

with the Secretary of the Treasury. They are issued to the bank making the deposit and bear on their face the name of the bank. It is the bank, however, which agrees to pay, rather than the government; the government merely stands back of the bank. A bank note has on its face, among other things, "The ————National Bank of———will pay to the bearer on demand———dollars."

The Federal Reserve notes are issued to the Federal Reserve Banks by an agent of the United States Treasury. They are sent to the member banks by the Federal Reserve Banks in return for deposits of commercial paper, and are then put into circulation by the local, or member, banks. The Federal Reserve Bank notes are used as yet only to a small extent. They are issued to the Federal Reserve Banks by the United States Treasury in return for deposits of government bonds, being in all essentials like the national bank notes which they are intended to replace.

Standard money. Among all these forms of money there is one which is known as standard money; that is, gold coin. The value of the gold coin depends on the value of the material of which it is made. So long as the present policy of the government is maintained, the value of a gold coin can never vary appreciably from that of the metal which it contains. One reason for this is that the government will undertake to coin all the gold that is brought to the mint and to charge nothing for the work of coining except the value of the alloy which is put in. Since this alloy also has some value, this virtually means that if you bring to the mint not only the gold but also the other materials which go into the coin, in the proper ratio, the government does the work of coining free of charge; you merely supply the raw material. Therefore, when there is even the slightest tendency for the value of coin to rise above that of bullion, men will anticipate this tendency by taking bullion to the mint. Since coin is easily melted down into bullion, if bullion showed the slightest tendency to exceed coin in value that would be anticipated by melting coin down into bullion.

These two processes make it practically certain that so long as the government can maintain its policy gold coin and bullion will be identical in value.

Token currency. Gold is the only form of money now in circulation in the United States which is actually standard money. The exchange value of a silver coin is greater than that of the metal of which it is made. The same is true of the nickel and bronze and conspicuously true of the paper. The general name applied to these other forms of money is "token currency." They are accepted in exchange not because of the value of the material of which they are made but because they stand as tokens, or representatives, of some other form of value. With the currency certificates, gold certificates, and silver certificates this is perfectly plain, because the bank agrees to pay other forms of money. Even with the silver coins, while there is no direct agreement to exchange gold for them, the practice prevails. In addition to this and quite as important also is the fact that the government itself receives all these forms of currency in payment of obligations to itself. Thus you can pay your taxes, you can buy postage stamps, you can pay customs duties, and any other obligation which you owe to the government in these other forms of currency. Technically the United States notes, or greenbacks, are not legal tender for payment of customs dues, but as a matter of fact they are receivable. By legal-tender currency is meant any currency with which you can pay a debt and compel the creditor to take that or nothing. You can offer, or "tender," him the amount of the debt, and he cannot demand some other form of currency. Most of our forms of currency are legal tender for any amount, except our smaller coins, which are legal tender for only limited amounts. They thus represent in that indirect sense a real value, or they serve these valuable purposes for their possessors. In the third place, some of them are declared to be legal tender; that is, you can pay your debt, not only to the government but to anyone else to whom you owe money, by offering various forms of token currency as well as by offering gold.

The question has frequently been raised, Why use such expensive materials as gold and silver for money? Would not some cheap substance, such as paper or aluminum, serve equally well? Many long and heated controversies have been waged over this question. The so-called "hard-money" school have taken the position that the government cannot make money, it can only stamp money. The stamp merely serves as a certificate of its weight and fineness; the market itself must then determine its value. The "soft-money" school, on the contrary, have pointed to many historic instances in which cheap materials have actually served as money and circulated at a value which bore no relation to the value of the substance of which it was made. The truth seems to be summarized as follows: (1) Long-established customs, in a country such, for example, as China, where custom rules supreme, may enable a kind of money to circulate at a customary value regardless of the commercial value of the material of which it is made. (2) A government which is in the habit of using a great deal of compulsion over a people who are in the habit of submitting to authority and compulsion may by its own decree cause money to circulate at legally established rates without regard to the commercial value of the substance of which it is made. But a government which is not in the habit of exercising a great deal of compulsion, and a people who are not in the habit of submitting to it, have to rely mainly upon voluntary agreement among individuals in most of the relations of life. (3) Where voluntary agreement rather than government compulsion is mainly depended upon, it has hitherto proved impossible to get people voluntarily to agree upon any substance as the material for standard money except something which has had a value as raw material commensurate to its value as money. (4) Cheaper substances may, however, be used in limited quantities as token money even in liberal countries where everything is done by voluntary agreement: (*a*) when standard money will be exchanged for it; (*b*) when the government will accept it in payment to itself; (*c*) in small quantities when the government exercises

its authority by compelling a creditor to accept it in payment of a debt when offered by a debtor. This, however, is an exercise of compulsion, but it is one to which many even of the liberal governments resort.

The scale of prices and the value of money. It is commonly understood that a general rise in prices of all commodities is the same as a fall in the purchasing power of money, and a general fall in prices as a rise in the purchasing power of money. When a dollar buys a great deal, it has high purchasing power but commodities are cheap. When it buys very little, its purchasing power is low but commodities are dear. It is very important, therefore, that we study this,—one of the most intricate and difficult of all economic questions.

Upon the question What determines the purchasing power of money? there has been much disagreement. There are a few certainties, however, and they should be understood by anyone who hopes to avoid confusion in the more detailed discussions.

Standard money. In the preceding discussion it was stated that gold is the standard money in the United States. It is the only kind of money in this country that derives its value from the material of which it is made, and the government makes no effort to give it a purchasing power higher than that of gold bullion of equal weight. In the case of every other form of currency the purchasing power is greatly in excess of that of the material of which it is made. This excess value is due to a special effort of the government. This special effort is for the specific purpose of giving to every other kind of dollar a purchasing power equal to that of the gold dollar. The gold dollar, consisting of 25.8 grains of gold, nine tenths pure, is thus the standard dollar. Every other dollar is given a value equal to that of a gold dollar mainly by the method of interchangeability or of redemption. So long as the government is willing and able to give gold in exchange for other forms of currency, and to accept other forms in payment to the government on the same terms as gold, every citizen is practically as desirous of

having these other forms as of having gold coin, and they will have the same purchasing power as gold coin.

The gold standard. In this country we have what is called free and gratuitous coinage of gold. By the free coinage of gold is ordinarily meant that the government places no restrictions upon the quantity of gold that may be coined. Anyone who cares to have gold bullion made into gold coin can have it done without limit as to quantity. By gratuitous coinage is meant that the government makes no charge for the work of coining the bullion. Accordingly, therefore, the holder of a quantity of gold bullion of the required fineness can take it to the mint and receive in return an equal weight of gold coin. If any charge is made, it is only for the necessary alloy to bring the bullion to the same standard as that required in the coin. It is pretty certain, so long as this practice continues, that gold coin can never be worth more than the bullion of which it is made. In short, wherever the free and gratuitous coinage of gold coin is practiced by the government, gold coin and gold bullion of equal weight and fineness must always have equal values.

Seignorage. If, however, any government for any reason suspends the free and gratuitous coinage of gold, the parity of value may easily disappear. If the government suspends the free coinage (that is, if it sets a limit to the quantity of coin it will manufacture or of bullion that it will make into coin) it might easily happen that coin would come to be worth more than bullion of equal weight. Again, if instead of coining the gold gratuitously the government were to charge for it or make a seignorage charge, as it is called, the value of the coin would tend to equal that of the bullion plus the cost of manufacturing; that is, plus the seignorage. But since the more enlightened and progressive nations have practiced both the free and the gratuitous coinage of gold, it has happened, as a matter of course, that gold coin has had, in all the great financial centers, the same value as the material of which it has been made. In such countries nothing can change the value of gold coin unless it

can also, at the same time, change the value of uncoined gold or gold bullion.

The silver standard. Many countries, particularly in Latin America, use silver as the basic metal and make silver coin the standard money. In those cases all that has been said concerning gold and gold coin in gold-standard countries can be repeated with respect to silver and silver coin in silver-standard countries.

Maintaining the parity of gold and paper currency. Even though other forms of currency are in circulation in any country, and there are many kinds even in this country (see page 370), every enlightened government tries, so far as possible, to maintain a parity between these other forms and its standard money. In this and other gold-standard countries this means that the effort is made to keep all other forms of currency on a parity with gold. In the United States, for example, it would be looked upon as little short of a disaster if a paper dollar of any kind or description or a silver dollar should not purchase as much as a gold dollar on the open market. Our government failed to maintain this parity for a number of years during and following the great Civil War of 1861–1865. Every European government that was engaged in the World War of 1914–1918 also failed in this respect. In all these cases gold was scarce and hard to get and paper money became cheap.

Redemption of paper currency. The method by which all these other forms of currency are held—if they are held—at a parity with gold is very much the same, fundamentally, as that by which the parity between gold coin and gold bullion is maintained. That is the method of interchangeability. So long as any holder of one can always and freely get the other in exchange for it, it is not likely that either one will ever have greater purchasing power than the other. The reason is that if anyone even suspected that the kind in his possession might have less purchasing power than the other, he would at once exchange it for the other. So long as the government stood ready and able to exchange either one for the other in unlimited

quantities, it would be impossible for one to have greater or less purchasing power than the other. This is as true of gold and paper money, or gold and silver, as of gold coin and gold bullion.

Suspension of specie payments. But when the government is no longer willing or able to exchange one for the other in the quantities presented, it is extremely unlikely that the parity of value will be preserved. When the reason for the government's inability to do this is the vast amount, let us say, of paper currency in circulation and the small amount of gold left in the country because of shipments of gold to foreign countries for the purchase of supplies, it is an absolute certainty that the parity cannot be maintained. When a government can no longer exchange standard money for paper currency, it is said to suspend specie payments. This is merely a confession of its inability to get enough standard money to exchange for all the paper that is being presented. There is nothing then to keep paper money from becoming cheaper than gold; that is, to prevent a paper dollar from having less purchasing power than a gold dollar.

Value of irredeemable paper. The question next arises, Why does paper currency have any purchasing power whatever when the government is no longer able to "redeem" it or to give standard money in exchange for it? We need first to distinguish between different kinds of paper currency. As was shown in the preceding chapter, gold certificates and silver certificates and Treasury notes are merely warehouse receipts, certifying that gold or silver has been deposited with the Treasury and is payable to bearer on demand. If the government refused or were unable to pay gold or silver on demand for these certificates, they would then be like any other form of paper money for which the government would not exchange gold. How much value would they have? The United States notes, or greenbacks, are not warehouse receipts, and there is no special quantity of metal kept on hand for their redemption. They are more nearly like a personal note of an individual, in that the government is bound to pay them, whenever they are

presented for payment, with any money it happens to have or can lay hands on. If the government refused to pay or redeem them, how much value would they have? National bank notes, Federal Reserve notes, and Federal Reserve Bank notes rest first on the credit of the banks, though ultimately on that of the government. If neither the banks nor the government could redeem them, how much value would they have?

Things that make a demand for paper money. There are several things that make paper currency desirable and therefore valuable, even though the holder cannot get standard money for it. In the first place, if the government will receive it for taxes or duties, or in the purchase of postage stamps, that alone would make it somewhat desirable and therefore it would have some value. Again, if it is made legal tender for debts, this will give it an additional value. If it is made legal tender for debts, it means that anyone who owes a debt can pay it in this kind of money and the creditor must accept it. The creditor may not like it, but from the standpoint of every debtor this kind of money becomes somewhat desirable and therefore has some value. With these two elements of desirability it is pretty certain that paper money would have some desirability and some value even though the government were never likely to redeem it in standard money. If it existed in small quantities, so that every dollar of it could probably be used in one of these two ways, or every possessor was pretty certain to find one of these two uses for it, there is every reason to believe that it might maintain its parity with standard money. While not redeemable in standard money, it is a partial substitute for it or, rather, it is a perfect substitute for it in two of the uses to which standard money is put.

Hope of future redemption. In most cases of suspended specie payments, there is the expectation of resumption at some time in the future; that is, though the government may not now be giving standard money in exchange for paper, it is understood that it will begin doing so just as soon as it can.

This also helps to make paper money desirable and therefore valuable. A great deal depends, of course, on the confidence which the people have in the ability of the government to resume specie payments and how soon they expect it to begin. During our Civil War it has been shown[1] that the disparity between gold and paper increased when there was bad news from the Union armies and decreased when there was good news. This showed very clearly that people thought more highly of paper money when it looked as though the war would soon be won by the Federal government than when it looked otherwise. While the quantity of paper money in circulation was considerable, and would probably have caused it to lose some of its purchasing power, nevertheless the expectation that it would sooner or later be redeemed in gold obviously had a great deal to do with giving it such purchasing power as it had.

Custom. In addition to all these factors which help to give irredeemable paper money some purchasing power in any country, there is the fact of custom, which, in some countries, plays an important part. The habit of handling a certain kind of money may, with the lapse of time, become so well established as to lead most of the people to care very little whether it is ever redeemed or not. If the government quietly stops redeeming in standard money, and if many of the people do not care anything about it, the money may go on circulating for a time as though nothing had happened. But where large sums of money are needed in international trade, in which local customs play no part, this is a factor that cannot be relied upon to keep irredeemable paper money in circulation. At best it has a limited application.

Fiat money. In those countries where the government is in the habit of exercising a great deal of authority and the people of yielding a great deal of obedience, a mere government *fiat* may go a long way toward keeping irredeemable paper money

[1] See W. C. Mitchell, A History of the Greenbacks, pp. 203, 204. The University of Chicago Press, 1903.

in circulation. Let such a government decree that a certain kind of paper money shall be accepted in all sales and threaten with dire punishment anyone who refuses to accept it: a docile people may submit and such a currency may circulate (for a time), especially if there is not too much of it.

Quantity a factor. In all these cases the question of the quantity of the irredeemable paper currency is an important but not the only factor. It is true that a smaller quantity would circulate and possess a higher purchasing power than a larger quantity. It is equally true that with the same quantity the expectation of future redemption, the willingness of the government to accept it in lieu of standard money in the payment of taxes and public dues, the existence of a legal-tender law, the influence of custom, and the habits of the people in the matter of obedience to the government will all have something to do with the purchasing power of paper money.

In the case of silver in this country there is, in addition to all that has been said about paper, the fact that the silver of which it is made has some value in itself. This alone makes a silver coin *somewhat* desirable and gives it *some* value. The aforementioned factors add to that desirability and value.

Effect of credit currency. Another and somewhat more difficult question arises with respect to redeemable currency in a country that actually maintains the parity of its redeemable currency with its standard money. How does an increase in credit currency, for example, affect the purchasing power of money, assuming that its parity with gold is constantly maintained? If the parity of gold coin and credit currency is maintained and also that of gold coin and gold bullion, no kind of money can become cheaper unless gold also becomes cheaper, or dearer unless gold bullion also becomes dearer. How can credit currency make gold bullion cheaper? It may do this by displacing gold coin and causing it to be melted down into bullion. If there were no credit currency of any kind and all our business transactions had to be carried on by means of gold coin, it would take more gold coin than is required when

most of the business is done with credit instruments.[1] So much bullion would have to be withdrawn from the arts and made into coin as to leave a scarcity in the arts. This scarcity in the arts would increase its value. In proportion, however, as credit currency displaces gold, gold is released from circulation and made available for use in the arts. This alone, even if nothing else were involved, would tend to cheapen it in the arts.

During and immediately following the World War, when so much of the business of the world was done with credit currency, very little gold was actually used in circulation. This tended to make gold abnormally cheap. Even in this country, where the parity of paper currency and gold coin was carefully maintained, prices were abnormally inflated, in spite of the fact that they were essentially gold prices. When the paper currencies of the world are diminished and gold is again needed in circulation, this increased demand for it will tend to raise its price and to decrease the prices of other things in terms of gold.

To support this conclusion adequately it is necessary to analyze the question of the commodity value of gold. If we forget, for a moment, that gold is ever used as money, and think of it as a metal having uses in the arts, we shall understand that its value is determined precisely as is that of any other commodity. In other words, the value of gold is determined directly by the utility of the marginal increment of the available supply. It is determined indirectly by the marginal cost of producing it, the cost being one of the factors which determine the supply. Where a commodity is used for two distinct purposes, whatever is used for one cannot be used for the other. That which is used for one purpose reduces the supply available for the other. The supply available for the second purpose being reduced, the marginal utility or value for that purpose is increased. In the case of gold, whatever is used as money is deducted from the

[1] It is estimated that at the present time (1921) there are approximately seven dollars of credit instruments of various kinds for every dollar of gold reserve. This would indicate that it takes only one seventh as much gold to do the work as would be necessary, *at the same scale of prices,* if there were no credit instruments.

supply available for use in the arts. If the total supply of gold were to remain the same, while gold should cease to be used as money, the supply available for use in the arts would be increased, and its value would of necessity fall.

It may be objected that if the demand were to be reduced, less would be mined, and the supply also would be reduced. Unless the failure to use gold as money actually made it cheaper, there would be on that account no falling off in the amount produced. To the miner it would be a matter of indifference whether the mints were closed to his product or not, provided he could sell it as well as ever. But if the driving of gold out of circulation and into the arts should result, as it certainly would, in cheapening gold, the latter would occasion a falling off in the amount produced. But this falling off would take place on the margin of production. In other words, those sources of supply which would otherwise be worked at the greatest cost would now not be worked at all. Only the better sources of supply would continue to be worked where gold could be produced at a cost not greater than its reduced value. Thus, even the marginal cost of producing gold under the new conditions would be reduced to correspond to the fall in its value.

Two uses for gold. It is easy to see that under the free and gratuitous coinage of the standard money the value of the money metal must be the same in coin as in bullion. It is perhaps not so easy to see how the distribution of the metal between the currency and the arts is determined. What proportion of the existing supply of gold at any given time shall go into circulation as money and what proportion into the arts, and what determines these proportions? This is a part of the general question of the distribution of any commodity between its different uses. It will always tend to forsake that use where its value is least and seek that one where its value is greatest, and thus keep the value normally the same in all. This means that gold will tend to distribute itself between its two general uses in such proportions that its marginal utility or value will be the

same in each. If for any reason too much gold should for a time go into circulation and too little into the arts, until people needed bullion more than they needed coin, bullion would tend to rise in value and coin to fall. This would not only keep the new supplies of gold from going to the mint but would also send coin to the melting-pot. On the other hand, if too little gold should for any reason go into circulation and too much into the arts, until people needed coin more than they needed bullion, gold would be sent to the mint in larger quantities until the equilibrium was restored. But if considerable delays or expenses were involved, coin would be certain to command a temporary premium or, as it would appear in market quotations, bullion would be at a discount. On the other hand, if the process of reducing coin to bullion were a difficult and expensive one, coin might be at a discount and bullion at a premium when, for any reason, too much gold had been made into coin.

Probably the opponents of the quantity theory would admit that the distribution of gold between the arts and currency takes place in some such manner as that just described. But to admit that is to admit a quantity theory. To admit that the share of gold which goes into the currency is determined automatically by the needs of business is to admit that the number of units in circulation as money has something to do with the value of each unit. What is to prevent all the new supplies of gold from going to the mint to be made into coin except the tendency which would be created for coin to fall and bullion to rise in value? Why should any conceivable degree of scarcity of coin induce bullion owners to go to the trouble of sending their bullion to the mint except a tendency of coin to rise in value as compared with bullion?

Hitherto this discussion has been based upon the assumption that gold, or standard money, formed the only kind of currency, — that there was no credit currency. When we come to consider the effect of substitutes for standard money upon the value of gold, it is manifest that, when a great many substitutes for the gold coin come into use, there will be less demand for gold for

the purpose of coinage. This tendency shows itself in the disappearance of gold coin as the number of substitutes increases. In other words, the increase in the number of substitutes for gold operates for a time in precisely the same way as an abnormal increase in the number of substitutes for anything else.

Gresham's law. This tendency of a cheaper substitute to drive out a more expensive one is not peculiar to money. Assuming that the cheaper article is a real substitute and serves the user's purpose just as well as the dearer article, it will almost invariably drive out the dearer. The tendency of cheap money to drive out dear money is called Gresham's law, from Sir Thomas Gresham, who is commonly supposed to have pointed it out in 1650. When a cheaper form of currency is legal tender it serves the purpose of a debtor quite as well as the dearer; that is, it will pay a debt quite as effectually. The creditor can't help himself; besides, he can turn around and force his own creditors to take it. If the government will accept it for taxes and other dues, it serves the taxpayer's purposes quite as well as the dearer money. If there is enough of the cheaper form of currency to serve all these purposes, it tends to be used exclusively. The dearer form then tends to disappear from circulation because there is no effective demand for it.

The quantity theory. That there is a connection between the quantity of money in circulation and the purchasing power of each money unit there can be little doubt. That the quantity is the only factor or even the principal one in determining the purchasing power of each unit is at least doubtful. How important the factor of quantity is in the determination of the purchasing power of money or the general price level of commodities has been the subject of much controversy. Those who hold to what is known as the quantity theory affirm that, with a given number of commodities to be purchased, the quantity of money is the chief factor in determining its purchasing power. Those who oppose it affirm that the quantity of money is a minor factor.

Speed of circulation. Both sides agree that the speed of circulation is also a factor; that is, a small number of dollars moving rapidly from person to person may buy as many things in a given time as a larger number moving slowly. Money, however, having no organs of locomotion, does not move of itself. A piece of money moves from one person to another only when the one who has it decides to buy something with it. It appears, therefore, that the speed of circulation depends on how rapidly people are buying. When they buy freely—never allowing any money to rest long in their pockets, cash drawers, or other places of deposit—it circulates rapidly; when, on the other hand, they are not buying freely but holding on to their money —keeping it as long as possible in their pockets, cash drawers, or other places of deposit—it circulates slowly.

As a matter of fact, prices rise when buyers are trying to buy faster than sellers are willing to sell at existing prices, and fall when sellers are trying to sell faster than buyers are willing to buy at existing prices. Unless an increase in the quantity of money induces buyers to buy more or faster than they had been doing, it can have no effect on prices. The circulation merely slows down automatically. That is to say, if the people have more money and do not buy any more with it, they must necessarily hold on to it a little longer, carrying more at any one instant in various places of deposit or letting it lie idle. It is highly probable, however, though not necessary, that when people have more money they will spend it; that is, they will begin to buy more than they did when they had less money. When this happens the increase in the quantity of money in circulation is followed by a general rise of prices. It is well to remember, however, that this rise of prices does not follow of physical necessity; it only follows as a result of a probable increase of purchasing. There is an approach to physical necessity when the new money is put into circulation by the government in the purchase of unusual supplies, as at the beginning of a war. Here is a definite increase of purchasing which, unless balanced by a corresponding decrease of purchasing by private

individuals, results in a necessary increase of total purchasing. This is certain to advance prices unless production is at once and for some independent reason speeded up correspondingly. Such a speeding up of production is not likely to happen except in response to rising prices. Even without any increase in the quantity of money, a similar increase in government purchasing is likely to increase the total amount of purchasing, and, if it does, it will tend to raise prices. Along with this rise of prices, and as an automatic result of increased purchasing without an increase in the quantity of money, there must come an increased speed of circulation. Again, it must be remembered that money has no power to increase its speed or to move at any speed; it only increases its speed as a result of more active buying.

Credit and the speed of circulation. It is not uncommon to assume that buying on credit increases the speed of circulation; that is to say, with a given quantity of real, tangible money much more buying can be done if credit is highly developed than if it is not. If we care to assume that a dollar moves faster when it lies still in a bank as a part of the bank's reserve, while several dollars in checks are being drawn against it, than it could if it were actually moving physically from person to person, there is no positive harm in doing so. It would probably be just as clear, however, to say that much purchasing is done with promises to pay money, thus economizing in the use of real money. How these promises are made to do a part of the work of money will be described in the chapter on Banking and Credit. At this point it may be said, however, that buying sometimes speeds up through the enlarged use of credit, or buying with promises to pay money, when men literally buy before they have the money to pay for their purchases. At other times buying slows down because sellers lose confidence in buyers' promises and will not accept them. Buyers must wait till they get some real money before they can buy. All variations in the rate of buying, whether they come through an increase or decrease in the quantity of real physical money, through a mere change in the willingness of people to spend

what money they have, through government purchases of unusual quantities of material, or through the enlarged or contracted use of credit, will tend to produce corresponding changes in the general scale of prices or the general purchasing power of a piece of money of a given denomination.

So long as the government pursues the policy of keeping all forms of money on a parity with gold there can never be any fluctuation in the purchasing power of money except as gold bullion fluctuates in value. If gold bullion rises in value, so must gold coins and every other form of currency; if it falls, they must all likewise fall. As a matter of fact, gold bullion fell steadily in value for more than twenty years preceding 1920; consequently money fell in value or purchasing power—in other words, prices rose steadily. In recent months gold and money rose and prices fell. We need not here inquire why gold rose or fell; it might be because of factors affecting its demand or supply or it might be because of factors affecting other commodities.

These fluctuations must be expected to continue so long as bullion changes in value and the standard dollar contains the same quantity of gold. Professor Irving Fisher proposes, therefore, to stabilize the purchasing power of the dollar by changing the amount of gold in it from time to time. When gold rises in value, put less in each dollar; when it falls in value, put more in each dollar. Of course it would require very careful statistical calculation to know just the right amount of gold to add or subtract from time to time, but this difficulty, while great, is not insuperable. If some other difficulties could be removed it would doubtless be possible to calculate the right amount of gold to put into the dollar from day to day to give it practically the same purchasing power at one time as at another.

Another difficulty, apparent rather than real, is that of having coins of different weight in circulation at the same time. This is easily overcome by not coining any gold at all, but substituting gold certificates. At the present time one can take gold bullion to the Treasury and leave it on deposit, receiving a

sort of warehouse receipt known as a gold certificate. Some prefer this even now to gold coin. When the certificate is presented, the same weight of gold is returned as was deposited. Under the new plan not the same weight but the same value would be returned as was deposited. The gold certificate, therefore, would always call for such a weight of gold as would have the same value as that which was deposited. There would be no serious difficulty in managing this.

Two real difficulties present themselves. First, the government would be making a profit or incurring a loss according as the value of gold went up or down. When the value goes up, the government would not have to return to the holder of gold certificates as many ounces of gold as were deposited when the certificates were issued. It would therefore have some gold left. There would be some difficulty in knowing what to do with it, but probably some new certificates could be issued against it and used to pay a part of the running expenses of government. On the other hand, when gold continues to fall for a long period, as it did before 1920, the government will incur a loss. It would find that it had constantly to return more ounces of gold than were deposited. In short, it would have to go out and buy gold to replenish its stock and enable it to redeem its gold certificates. Even this might be worth doing if it would stabilize prices.

A more serious difficulty arises with respect to foreign trade. Unless an international arrangement could be entered into, foreign exchange would be in a hopeless muddle. It would require a statistical expert and a quick calculator to tell at any time what the pound sterling or the franc was worth in dollars. It is hard enough now, but it would be almost impossible then. This is probably the most serious difficulty, unless it can be removed by an international arrangement.

Why not stabilize gold? Until such an international agreement can be arranged, it is doubtful if any single country can be induced to make this experiment. Meanwhile, something can be done toward stabilizing the purchasing power of gold itself by any nation that thinks the stabilizing of prices im-

portant enough to be worth the trouble. In so far as the purchasing power of gold can be stabilized, that in itself will stabilize the dollar without changing the quantity of gold in it. Something can be done in this direction by a skillful handling of the problem of credit and credit currency.

It was shown earlier in this chapter that the enlarged use of credit enables a country to carry on a given amount of business with less gold than would be necessary if no credit or less credit were used. This furnishes a clue to the solution of the problem. If the use of credit were restricted, it would take so much gold to do the money work as to affect appreciably the total demand for it. So much would have to be withdrawn from the arts to supply the need for currency as to make a genuine scarcity. The users of gold in the arts would have to bid for it in order to hold an adequate supply. This would tend to give it a higher purchasing power.

Since about 1897 the purchasing power of gold the world over fell continually until 1920. This was doubtless due mainly to remarkable increase in the world's production of gold which began about ten years earlier. At the same time, however, the use of credit instruments had been growing in the principal gold-using countries, and a smaller percentage of the world's business was being transacted with actual gold as the medium of exchange. This tended to reduce the demand for gold below what it would otherwise have been. These two forces, working together, produced a steady decline in the purchasing power of gold and a steady rise in commodity prices.

During the World War there was a phenomenal increase in the use of credit currency which resulted in the almost complete nonuse of gold. The principal gold-using countries of Europe practically abandoned the gold standard, at least temporarily, and went on to a paper-money basis; that is, they issued such quantities of credit currency and sent such quantities of gold abroad in international payments as to make it impossible to redeem paper with gold. Paper money of course depreciated, even in terms of gold, and prices in those countries, quoted in terms

of depreciated paper currency, soared much higher than in this country, where prices continued to be virtually gold prices, since we maintained the parity of gold and paper. Those European countries practically released all their gold and threw it onto the markets of the world, much of it coming to this country, literally flooding our market with it.

In the United States we found ourselves with more gold than we knew what to do with. Instead of using this vast supply of gold as currency, which would seem to have been the part of wisdom, we took pains to use very little of it, using, instead, more credit currency than ever, especially in the form of Federal Reserve notes. The monetary policy seems to have been aimed principally or almost exclusively at the maintenance of the parity of gold and paper and not at all at the maintenance of stable prices or at stabilizing the purchasing power of gold. We seem to have taken some pride in the fact that our paper currency has not depreciated in terms of gold, overlooking the fact that gold itself depreciated in terms of commodities. The fact that any kind of a dollar will purchase as much as a gold dollar is of course a matter of some importance, but it would have been much more satisfactory if the gold dollar had not lost so much of its purchasing power and prices had not risen to such unprecedented heights. If the increased volume of business occasioned by the war had been carried on without any increase, or even with some decrease, of our credit currency, it would have taken so much gold to do the work—in other words, it would have so increased the demand for gold—as to give it a purchasing power much higher than it had. We should thus have been saved from the enormously inflated prices of the war period and the train of evils that followed them.

That there would have been some difficulties with such a policy goes without saying. It is merely a question whether we think that the evils of inflation and deflation are serious enough to justify the cost of preventing them or not. In order to stabilize or help to stabilize the purchasing power of gold

it is necessary that the use of it or the demand for it shall increase in times when its value is falling and decrease when its value is rising. The way to increase the demand for it when its purchasing power is falling and commodity prices are rising is to use fewer substitutes, thus forcing people to use more gold. The way to decrease the demand for it when its purchasing power is rising and commodity prices are falling is to use more substitutes and release some of the gold from circulation. In other words, when commodity prices are rising (which means that the purchasing power of gold is falling), credit currency should be reduced until the increased demand for gold would arrest its further fall; and when commodity prices are falling, more credit currency should be issued until the decreasing demand for gold would arrest its further rise. This would require not only expert statistical calculation and management but also great wisdom on the part of the people to avoid political tinkering with the process, but the difficulties are inherently no greater than those involved in changing the quantity of gold in the dollar.

Two kinds of elasticity. One of the first difficulties is a purely educational one; namely, that of correcting our ideas of an elastic currency. As ordinarily used, that term means a currency that expands when business is unusually active and contracts when business slows down. Such a currency is said to respond to the needs of business. When buyers are active and anxious to buy a great deal, this kind of a currency gives them the means of buying. When buying is inactive and buyers are not trying to buy much, they do not need so much money, and it should therefore decrease in quantity. It is commonly assumed that this adjustment of the supply of money to the demand for it is desirable. It is not improbable that over long periods of time more business will be done, with less inconvenience and friction, when the currency behaves in this way than when it behaves otherwise. It enables people to "make hay while the sun shines," to "get while the getting is good," etc., but it also forces them into periods of inaction and

business stagnation. In short, this sort of elasticity in the currency increases business activity when it is active and retards it when it slows down. The policy outlined in the preceding pages would do the opposite; that is, it would retard business activity when it was active and stimulate it when it showed a tendency to slow down. It is a question whether this is not a better kind of elasticity.

As to the actual methods by which credit currency can be made to decrease, or kept from increasing when business is very active, an easy but not very effective method is that of changing the rate of bank discount. When business is active and the demand for bank credit keen, the banks would naturally, if they were permitted to follow their own interests, raise their rates of discount, which means, virtually, that they would charge a higher rate of interest on their loans. This would have the effect of discouraging borrowing and reducing the use of bank credit below what it would be if rates were low. Again, when business is inactive and the demand for loans decreases, the tendency is to lower the discount rates or to lend bank credit on easier terms. The Bank of England, for many years before the World War, exercised great control over the monetary situation by pursuing this simple policy. Our Federal Reserve Banks have performed the same function to a certain extent, though sometimes interfered with by the mistaken policy of the Secretary of the Treasury.

CHAPTER XXVIII

BANKING

Promises to pay. Where business is done on the basis of voluntary agreement among free citizens it is probable that many kinds of agreement will be made. Among these many forms there will probably be promises to pay money or to deliver some desirable object at some future time. In order that such promises may be accepted, one or both of two conditions must exist. First, and most important, the receiver of a promise may have confidence in the maker of the promise, both as to his honesty and his ability to fulfill his promise. Second, the receiver of the promise may have confidence in the power and the willingness of the government to compel the maker of the promise to keep it. Unless one or both of these forms of confidence should exist, promises to pay are not likely to have much value or to be accepted widely.

Need of institutions to deal in promises to pay. In all countries where confidence exists (that is, where men are generally honest and governments reasonably efficient) these promises come to play a large part in free and voluntary exchange. The mass of such promises and the habit of dealing in them have come to be called the system of credit. The most common of these promises are promises to pay money. So common have they become, and there is so large a volume of them, that they call for special institutions or business establishments to deal in them. These establishments are now called banks. The term "bank" originally meant the bench before which the money changer sat, with his coins stacked up before him. When he failed in business his bench was broken up, hence the word "bankrupt."

Receiving deposits and making loans. The original business of the bank was ostensibly to deal in money, but out of this has grown the business of dealing in credit or promises to pay money. Lombard Street became the banking center of London, from the fact that it was occupied by goldsmiths from Lombardy. They had to have safes to store their valuables. During the turbulent times of the sixteenth and seventeenth centuries certain worthy Londoners used to deposit not only their valuables but their money with these goldsmiths for safe-keeping. Having so much money on hand, the goldsmiths began gradually to lend out small sums, always taking precautions to keep enough on hand to meet the demands of depositors whenever they were presented. This business of receiving deposits and making loans, which is the essence of all banking, eventually became more lucrative than the trade of the goldsmith. More and more, therefore, they gave up their original trade and became dealers in money and credit; that is, receiving deposits and making loans. These two things are still the fundamental purposes of a bank. The depositors came to recognize the legitimacy of this business, and it became respectable and well established and is now one of the most important of all forms of business.

Elements of safety. When a bank has many depositors to whom it owes money and many borrowers who owe it money, it is, *if properly managed,* a safe business for all concerned. The depositors to whom the bank owes money are not likely to want it all at once. All the bank has to do is to see that it has in its vaults every day a little more money than its depositors are at all likely to want on that day. When the bank is properly managed, its promises to its depositors are always good, and the depositors can always get their money when they want it. At the same time all the promises to pay which it has received from borrowers are always good, and the borrowers will pay back the money the day it is due.

In order to understand how a depositor is safeguarded, it is necessary to go a little more into detail. In the case of a state

bank, all the property of the bank is ultimately available for the payment of the depositors; that is, if the affairs of the bank are wound up, every depositor must be paid in full before the owners or shareholders get anything out of it. In the case of a national bank the bank notes which it has issued take precedence, but these are secured by special forms of property (such as government bonds and other securities) which it has deposited with the Federal Reserve Board. All the other property of the bank is then available, as in the case of the state banks, for the payment of the depositors. In addition to this, each shareholder may be assessed an amount equal to the par value of his shares in order to pay depositors. Thus the shareholders, or owners, may lose all that they originally put into the business, plus an equal amount, before any depositor can lose anything. This makes the depositor relatively safe.

Reserves. Let us now see in what the property of the bank consists. In the first place, there is what is called the reserve. This consists either in cash on hand or in part cash on hand and part deposits in the Federal Reserve Bank. This reserve is required to bear a certain ratio to the total cash obligations of the bank, and in normal times is always ample. It is obvious, however, that if an abnormally large number of depositors were to demand payment at the same time this reserve would be exhausted; that is to say, the bank would have no cash left. Unless the bank could get extra supplies of cash, depositors would then have to wait until some of the other property of the bank could be turned into cash.

This other property, however, is mainly in the form of loans of various kinds and would be ample unless there had been fraud or bad management. Since most of these are short-time loans, they are being paid from day to day, and cash is rapidly flowing in. Normally this would replenish the cash reserve in a few days. In fact, the bank can usually call loans in rapidly enough to keep its cash from being exhausted even by an abnormal demand. In addition to these short-time loans, there

are usually a few long-time loans and other securities. If these are exhausted and the affairs of the bank have to be wound up, the real estate and office fixtures may be sold. If these are not enough the owners of the bank may be assessed, as indicated above, in order further to safeguard the depositors. In short, nothing except fraud or bad management could cause a depositor to lose any portion of his deposit.

Making money more active. While, as stated above, the essential work of a bank is to receive deposits and make loans, by doing these things it performs certain important functions in the national economy. One of these functions is to take money which would otherwise have remained inactive and put it to work. The individual who has a fund of purchasing power which he does not care to invest for the time being may deposit it with a banker; someone else who has an opportunity for investment (that is, for the active use of capital) may go to the banker and borrow it. The banker is, therefore, the middleman who stands between the one who has money to spare for which he has no immediate need and the one who has a need for capital which he does not possess. Without the banker these two men might have difficulty in finding each other. The banker at least saves them time and trouble. It is very much the same function as that performed by any other middleman. The producer of material products does not have time to peddle his goods among consumers, and the consumer does not have time to search for a producer who has for sale exactly what he wants to buy. Both go to the merchant, the one to sell his surplus, the other to buy his supplies. The merchant saves both of them the trouble and earns an income in return for the service which he performs.

Savings banks. The depositor may prefer to leave his money on deposit for a long time or for a stated time, or he may prefer to deposit it on condition that he may withdraw it at any moment when it suits his convenience to do so. The former class of deposits are commonly called savings deposits; and the latter, deposits subject to check. The savings banks

are a special class which receive savings deposits, whereas the ordinary commercial bank receives deposits subject to check.

Trust companies. Trust companies were originally formed, as their name implies, to act as trustees; that is, they would take care of valuable papers, such as mortgages and other securities, collect interest on them, pay obligations when due, execute wills and bequests, handle estates for people who needed or desired to be relieved of the work, and perform a great many other similar tasks. In the course of this work they naturally had to handle a great deal of money. At one time they kept this money in regular banks, but in recent times they have generally kept it in their own vaults or have loaned a part of it on ordinary commercial loans. This means that they have been doing a regular banking business in addition to the business of a trust company as originally conceived. In fact, it is not, at the present moment, easy to distinguish a trust company from any other commercial bank.

Origin of the bank check. Originally, when a depositor who had money in a bank wished to make a payment to another person, it was necessary for the depositor to withdraw his money from deposit and hand it to the payee. A little later the custom grew up of going in person to the bank and authorizing the bank to transfer a certain sum from the payer's to the payee's account. The payee could then draw out the money as he needed it. From this it was an easy step to the custom of giving the bank a written order to pay a certain sum to another person. This written order became known as a bank check. These checks proved so convenient that they became one of the principal means of making payments. A, who wishes to pay money to B, merely hands a check to B,—a written order on the bank. B may then withdraw the money, or he may deposit the check and have the sum transferred from the payer's account and credited to his own account, or he may indorse the check and pass it on to a third person. This third person may pass it on to a fourth, and so on almost indefinitely. Sooner or later, however, some individual who receives the check will deposit it

with his own bank. If it happens to be the same bank on which it was originally drawn, the matter of transferring the account is very simple; if it happens to be another bank, and there happen to be a great many banks in the same business center, each one receiving in the course of the day's business a great number of checks on all the others, a somewhat complicated problem is certain to arise. This is the problem of bank clearings. A bank draft is merely a check on one bank drawn by another bank. A certified check is a private check to which the bank on which it is drawn certifies or the payment of which it guarantees.

The clearing house. The vast increase in the use of bank checks in the making of payments long ago created the necessity for a special institution known as the clearing house. At the close of each day's business every bank in a large commercial center finds itself in possession of a number of checks on each of the other banks. Originally messengers were sent the rounds, carrying bundles of checks. This was both a cumbersome and an expensive process. In order to save time and shoe leather these messengers formed the habit of meeting at certain places at certain hours and exchanging their bundles of checks, keeping records of all such transactions. By this simple process the messenger from one bank would receive all the checks on his own bank from the messengers from the other banks, and at the same time he would deliver to the messengers from each of the other banks the checks on their respective banks deposited with his bank.

From this it was an easy transition to the organization of a regular clearing house, which eventually became the heart of the whole financial district. The late Charles F. Dunbar describes the process as follows:[1]

> This medium of payment acquires great perfection wherever the clearing-house system is adopted. Under this system there is a daily meeting of clerks representing all the banks carrying on business at any common center. Every bank there turns in at a central office

[1] The Theory and History of Banking (third edition, enlarged by Oliver M. W. Sprague). G. P. Putnam's Sons, New York and London, 1917.

all the checks and cash demands which it holds against others, and is credited therewith, and is also charged with all checks and demands brought against it in like manner by others. The checks and demands which have thus been credited to and charged against each bank are then summed up, and the balance found to be owed by or due to each bank, as the case may be, it then pays to or receives from the central office in money. By this means a great mass of transactions, which would otherwise require a series of demands by each bank upon every other in the same place, are settled at once, and the transportation of large sums in cash from one bank to another is to a great extent dispensed with.

The bank deposit, circulated by means of checks, is the most convenient medium of payment yet devised. A stroke of the pen transfers it in whatever amount is needed for the largest transaction, and this transfer instantly becomes the basis for fresh operations, with as complete security against accidental loss as can be imagined. In the strict economic sense this medium no doubt has rapidity of circulation in a high degree, while in the sense of actual activity of movement in a given time it far outstrips money or notes, and has been well said to be the most volatile of all the mediums of exchange. Of the entire circulating medium of this country, it forms incomparably the greatest, although the least considered, part. Depending for its efficiency solely upon convention, it for the most part eludes the regulations which legislatures so industriously enforce upon the other constituents of the currency. Indeed, beyond the requirement of a minimum reserve made by the law of the United States, and of most of the several states, we may say that the subject is not touched by legislation, in this country or elsewhere. The necessity for payment in specie or legal-tender paper upon demand, the chief safeguard of value, is the result of general provisions for the payment of debts of any kind. And the chief assurance against excessive expansion on the part of any single bank or banker is given by the certain demand for prompt and frequent settlement occasioned by the voluntary establishment of the clearing house, or by the habits of the community, but not by law.

Since the above was written, the Federal Reserve Act has been passed and the Federal Reserve system put into operation in the United States. Dunbar's description of the essential

methods of clearing still applies, but most of the bank clearings in this country are now done through the Federal Reserve Banks. The clearing house is essentially a *banker's bank,* where banks make their payments to and collect their obligations from one another very much as private individuals who do business with the same bank make their payments to and collect from one another. The Federal Reserve Banks are now in a peculiar sense fitted to act as the bank for the member banks, thus taking the place of the clearing house.

When you make a payment to someone in another city with whom you have business relations or who knows you and your solvency, a very convenient method is to send him a check on your own local bank. He will then present your check to his own bank for collection. His bank will usually credit him at once with the amount for which the check is drawn and then send the check through a regular groove. Usually it will send the check to the Federal Reserve Bank of its district, and this Federal Reserve Bank will send it either to the bank on which it is drawn or, if that bank is in another district, to the Federal Reserve Bank of that district, which will, in turn, send it to the bank on which it is drawn. When the check gets back to you, you can trace its course by the indorsements on its back. Sometimes the banks find it necessary to charge a small fee for collecting a check of this kind.

Bank checks do not circulate quite so freely among private individuals as money, because each check must be indorsed by each person through whose hands it passes. Therefore a check will be accepted only from a person whose signature is known to be genuine. Since, however, paper money circulates without indorsement, one will accept it from a stranger or a known rogue unless one has reasons for suspecting the money to be counterfeit.

Domestic and foreign exchange. This habit of making payments by means of bank checks has extended beyond the limits of any city or of any country. Business transactions between cities and between countries are carried on in much the same

way. This necessitates some convenient way of balancing payments from one city to another and from one country to another. The one method is known as domestic and the other as foreign exchange. If a man in one city, say Chicago, must pay for goods which he has bought in New York, and another man in Chicago is to receive an equal amount of money for goods which he has sold to someone in New York, it would be much simpler for the first man to pay the second man, thus canceling both debts, than for money to be sent both ways. Domestic exchange is merely a system on which this can be done on a large scale between all the large cities. If the men in question live in different countries as well as in different cities, the same problem arises and is complicated by the difference in the monetary systems of the different countries.

It will frequently happen that, for a time, more money is owed by citizens of one country, say the United States, to citizens of another, say England, than is owed by citizens of England to those of the United States. In such cases the debts do not exactly cancel one another. If Americans owe more to Englishmen than Englishmen to Americans, there is said to be an unfavorable balance of trade in America and a favorable one in England; that is, some money must flow from America to England to pay the balance and in the opposite direction if the balance of trade is unfavorable to England and favorable to the United States. Rather than send money to England, when the balance is against us, paying the cost of transportation and losing the use of it for a time, those Americans who owe the money will try to find others who have money coming to them from England and will even offer a small premium for bills on England. English, or sterling, exchange is then said to be above par; that is, the American who is to receive an English pound can sell his claim for a little more than $4.8665, which is its par value in American money. When the balance is the other way sterling exchange is below par; that is, the man who has to wait and get his money from England will sell his claim for a little less than $4.8665 for each pound sterling. During the

World War the English people had nothing to sell to us and much to buy from us. The balance was so overwhelmingly against them as to exhaust all their available gold, and they could not make any payments at all for a long time. The pound sterling naturally fell far below par, as it must in all such cases, depending on the probable lapse of time before trade can again reach a normal balance.

Dealers in foreign exchange are merely middlemen who buy and sell these obligations between countries. The man who has money coming to him from another country does not have to find a man who owes the same amount of money to the other country; he merely sells his claim to one of these dealers. Similarly, the man who owes money to another country does not have to find a man who has the same amount coming to him from the same country. He merely goes to one of these dealers and buys a claim to cancel his own obligation. It is largely through these dealers in foreign exchange that international payments are made with very few shipments of money.

Bank notes. Certain banks, such as national banks, have been permitted to perform the special function of issuing bank notes and thus providing a circulating medium which answers the purpose of money if it is not itself a form of money. These notes have circulated from hand to hand in all respects as money. They differ from the notes of an ordinary individual in that they pass from hand to hand without indorsement. The note of an individual may circulate to a certain extent, but the laws and customs of business require that it be indorsed by everyone through whose hands it passes. In that important respect the private note differs from money. It is the custom for a modern bank note to pass from hand to hand in full payment of all obligations without indorsement and without any regard to the honesty or credit of the individual who offers it in purchase of a commodity or in payment of a debt.

The Bank of England. In some historic cases this custom of issuing notes has grown up without the authority of the government and without any special help from the government, precisely

as the custom of receiving deposits and making loans has arisen. In most modern countries, however, where bank notes are allowed to circulate, they are not only authorized by law but very carefully supervised and safeguarded. The Bank of England, for example, occupies a position with respect to the British government somewhat similar to the position which an ordinary bank in this country occupies with respect to one of its largest customers. The British government maintains no separate treasury of its own, but deposits any surplus money which it may have with the bank, just as a private firm deposits its surplus money with its own bank. The British government makes its payments by orders on the bank, very much as a private firm would make its payments by check on its own bank. When the British government desires to borrow money, except in extraordinary cases, it has generally borrowed through its own bank, the bank merely serving as the agent of the government in this respect.

In return for various services which the bank has performed, it has been permitted to issue bank notes up to a certain extent (£17,775,000) secured by debts of the government to the bank and to keep them in circulation very much as other forms of money are circulated. Beyond this quantity it was permitted to issue notes only under the most rigid restrictions. All its additional notes, in normal times, are virtually warehouse receipts similar to our gold and silver certificates; that is to say, for every note issued, an equivalent in gold has had to be deposited with the bank. These notes were merely conveniences to the general public. An individual who did not wish to carry a large quantity of gold could take it to the bank, deposit it, and get notes instead. The notes are issued only in large denominations. Since the outbreak of the World War the restrictions upon the issue of notes have been removed, so that, for the time being, the Bank of England is permitted to issue notes at will.

The old Bank of the United States. In this country the old Bank of the United States was chartered in 1791 for twenty years. A new charter was refused in 1811, and it went out of

existence. A second bank, similar to the first, was chartered in 1816, to run for twenty years. Both these banks served much the same purpose as the Bank of England; that is, the United States Bank was in a sense the banker of the Federal government. It went out of existence, however, in 1836, having failed to secure a new charter, partly through the opposition of President Jackson.

The national banking system. In 1863 the foundation of our present national banking system was laid and a series of national banks was created, partly as a means of making a market for the bonds which the Federal government was offering for sale in order to get money with which to carry on the Civil War. Any bank chartered under this act was permitted to deposit bonds of the United States with the Secretary of the Treasury, and in return for these deposits it was permitted to circulate bank notes up to 90 per cent of the value of the bonds deposited. Thus, if the bank failed, the government had possession of enough of its property to redeem all the notes which it had issued. In a sense the bank had pawned valuable property (that is, government bonds) and received a kind of pawn check in return. These "checks," called bank notes, it was permitted to circulate. This is essentially the characteristic of our bank notes to the present day. Subsequent acts have made some changes in the system, particularly the act of 1908, which permits a national bank to deposit certain other securities besides United States bonds as a basis for its note circulation.

The Federal Reserve system. The most important piece of banking legislation in this country since the National Bank Act of 1863 was the Federal Reserve Act of 1913. Under this act there was created under the Treasury Department of the United States a Federal Reserve Board consisting of five members besides the Secretary of the Treasury and the Comptroller of the Currency, charged with the general administration of the national banking system. The country was then divided into twelve districts, and within each district a city was selected, to be called a Federal Reserve city. The cities chosen were

Boston, New York, Philadelphia, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Kansas City, Dallas, and San Francisco. In each of these cities was organized a Federal Reserve Bank. This bank was to be the central bank of the Federal Reserve system in the district within which it was located. All the national banks, and all the state banks which wished to become national banks, by coming in under the Federal Reserve system, were to become member banks and, in a sense, tributary to the Federal Reserve Bank. They have a voice in the control of the Federal Reserve Bank of their own district. Each member bank is required to subscribe to the capital of and to keep all its required reserves on deposit with the Federal Reserve Bank of its district. The Federal Reserve Bank thus becomes, in a sense, the bank of the member banks of its own district. It does no business directly with private individuals, aside from the purchase of bills of exchange in the open market. The Federal Reserve Banks themselves carry on their clearing through a special branch of the Federal Reserve Board in Washington. This may be called the bank of the Federal Reserve Banks.

General purposes. The general purposes of the Federal Reserve system may be summarized under three heads: first, the provision of a general and well-organized market for the selling of commercial paper; second, the pooling of the reserves of existing banks; third, the provision of an elastic currency. The first and second of these purposes are provided for partly by the requirement that each member bank shall keep a part of its funds on deposit with the Federal Reserve Bank of its district. In return for this the Federal Reserve Bank is to take commercial paper (that is, notes and other promises to pay money to the bank) and send it money instead. Thus, an individual who wishes to borrow money from the bank gives it his own personal note, properly secured. When the bank has a large batch of these notes and other obligations, and needs more cash, it can indorse these notes and "sell" them for cash to the Federal Reserve Bank.

An elastic currency. The purpose of providing an elastic currency is carried out in the plan for the issuing of bank notes. Two classes of notes are provided for under the system: first, Federal Reserve notes and, second, Federal Reserve Bank notes. The Federal Reserve notes are issued to member banks by the Federal Reserve Banks in return for securities of various kinds. For example, when a member bank sends in a batch of personal notes and other obligations and asks for cash, it may get its cash in the form of Federal Reserve notes. These notes are issued to the Federal Reserve Banks themselves by a government official known as a Federal Reserve agent. Vast quantities of these notes have been issued, especially since the entrance of the United States into the World War.

Not much use has been made as yet (1921) of the Federal Reserve Bank notes. They are based upon government bonds which are deposited with the Treasury Department, just as is the case with national bank notes.

It is the Federal Reserve notes, rather than the Federal Reserve Bank notes, which give elasticity to the currency. When business is active and the member banks are doing a large lending business (that is, lending a great deal of money to individuals and firms) they will, of course, have received as security many personal notes and other obligations. By sending them in large batches to the Federal Reserve Banks they get large quantities of Federal Reserve notes, which they proceed to lend out, receiving other notes and obligations in turn. By repeating this process they put large quantities into circulation when money is needed or demanded. When the lending business is slack (that is, when there is not much demand for money) fewer of these notes are put into circulation. Thus the supply automatically adjusts itself to the demand. It is still an open question, however, whether this does not increase rather than decrease the tendency toward overexpansion of business at certain times and business depressions at other times.

National and state banks. A national bank in this country is any bank which is chartered under Federal law as distin-

guished from state law. With the exception of the first and second Banks of the United States, of the banks chartered under the National Bank Act (referred to above), and of those organized under the present Federal Reserve system, all banks in the United States are chartered under state laws and are therefore state banks. Before the Civil War many state banks issued bank notes. In many of the states the regulation and inspection were very inadequate, and the state banks were permitted to issue notes which they could not redeem; that is, for which they could not exchange lawful money when they were presented. These came to be known as wildcat banks. Since the establishment of the national banking system during the Civil War the privilege of issuing bank notes has been reserved for banks chartered and controlled by the Federal government; that is, for national banks.

Agricultural credit. The business of agriculture has been the slowest of all to make a large use of credit. One reason has been the lack of machinery designed to provide the farmers with the kind of credit which they have needed, as the ordinary banks have provided the merchants and manufacturers with the kind which they have needed. The farmer needs comparatively little short-time credit, as the merchant and manufacturer understand that term. The bank which does a regular check and deposit business, whose deposits are continually being withdrawn and replenished, must keep its assets in liquid form. Farm mortgages are notoriously hard to dispose of, and no commercial bank would feel safe if it loaned a large proportion of its deposits out on that kind of security.

Enlarged demand for capital. It was the mechanical inventor who, more than anyone else, created the vast opportunities for the use of capital in the modern world. This is as true of agriculture as of the other industries. The simple tools and equipment with which farming was done in former times involved very little preliminary outlay in order to begin farming on an equality with other farmers. Such implements as the farmer could not make for himself he could procure at a low cost from local mechanics. In old countries land has not com-

monly been a matter of merchandise, and there was therefore little occasion for the farmer to invest heavily in land. Not having to invest heavily either in land or equipment, he required little financial aid. In the United States, where land has been regarded as a salable commodity, it remained so cheap until quite recent times as to call for no heavy outlay on the part of the purchaser. In fact, under the public land policy of the Federal government the landless farmer could become a farm-owner at a merely nominal price or, under the Homestead Law, without money and without price. Under such conditions, when farming was done with simple and inexpensive equipment and on cheap land, the problem of financing the farmer was a very simple one and did not call for a special sort of financial institution.

Coming of agricultural machinery. Beginning about 1830 a remarkable series of mechanical inventions began which brought about a transformation in agriculture somewhat similar to that which had taken place in manufacturing a half century earlier. They did not transform agriculture from an industry of small into an industry of large units, as happened in manufacturing, but they did transform it from an industry in which capital had played a negligible part to one in which it was to play a major part. Power-driven farm machinery has become not only expensive but so very efficient that no farmer can now hope to succeed without it in competition with farmers who possess it. This has transformed farming into a capitalistic industry and the farmer into a small capitalist. Somewhat earlier, however, the equipment of a cotton farm had required a considerable preliminary outlay because of the prevalence of slavery and the high cost of slaves. It is the necessity for a large preliminary outlay, and not the scale of production, which constitutes a capitalistic industry and creates the problem of financing it.

Rising price of land. Even with the growing cost of equipment the problem of financing the farmer did not become so very acute until about the beginning of the present century. So long as there was good farm land in the public domain to

be had for nothing, such land had remained cheap in all parts of the country. With the practical exhaustion of desirable free land, other lands began to rise rapidly in price. Tenancy in this country has never been considered as other than temporary and abnormal. The average American farmer has always expected to own his farm sooner or later, tenancy being regarded merely as a transitional state from that of farm laborer to that of farm-owner. The rapid rise in the price of land, however, has greatly increased the difficulty of the final stage of the transition. Prior to 1890, in almost any part of our best farming area a month's wages of a farm hand was equal to the price of an acre of good land. At the present time (1921), in spite of a considerable rise of farm wages it will take at least four and in many cases eight months' wages to buy the same acre.

Increasing difficulty of financing the farmer. For the young and landless farmer this combination of expensive equipment and high-priced land has presented a more and more serious problem in recent years. Unless he has been able to get the personal backing of some individual with capital to spare, he has had a slim chance of success. Various methods have been resorted to. Manufacturers and sellers of agricultural machinery and fertilizers have developed an elaborate credit system. In many cases the manufacturer has sold to the country dealer on credit and he, in turn, has sold to the farmer on credit. Such credit, however, has usually been for a relatively short time; that is, for the growing-season. A multitude of small country banks have sprung up, mainly since 1900, to help in the financing of such farm operations as can be completed within a growing-season, or a year at the outside. A characteristic operation of this kind is found where a bank lends a corn farmer money with which to buy cattle from the Western ranges, which cattle the farmer fattens with his own corn crop and then sells to one of the great slaughtering establishments, paying off his loan with a part of the proceeds.

Long-time credit. The greatest difficulty, however, has been presented by the farmers' need for long-time credit. When a

tenant farmer wishes to buy a farm of his own or when a landowning farmer wishes to make permanent and expensive improvements, if he needs to borrow at all, it will usually take a period of years to repay the loan. The only satisfactory security he can offer for such long-time loans is a mortgage on the farm. But the market for farm mortgages has been a limited one. In other words, comparatively few persons are willing to accept a mortgage as security for money loaned. The reasons are rather obvious. One must be a good judge of farm values and must also understand the legal questions connected with mortgages and their foreclosure; otherwise it is not safe for one to lend on mortgage security. These reasons are especially strong in a new community where there are no local lenders and where loanable money must be secured from a great distance. The distant lenders are not in a position to know much about farm values, and if they live in other states they may not know much about the local statutes governing mortgages. Such communities have for these reasons always had difficulty in getting loans on favorable terms.

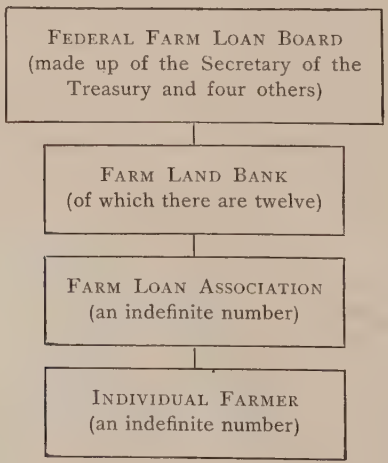
Private agencies for financing the farm. This difficulty had been partially, but only partially, overcome in various ways. A local agency, either individual or corporate, knowing local farm values and other conditions would accept mortgages and add its own guaranty to increase their marketability and then sell them to distant investors. Again, certain large Eastern concerns, such as insurance companies, would send their own experts to selected regions to inspect farms and place loans secured by farm mortgages.

Again, a number of large corporations, commonly called mortgage banks, were organized to lend on farm mortgages and to sell bonds to the investing public. Such a corporation, having "bought" a number of mortgage notes aggregating, let us say, $100,000, would deposit them with a trustee as security for its own bonds to the amount of $100,000. These bonds would then be sold to the general public. The investor had the advantage of buying a security resting on the entire assets of

the corporation, including the mortgage notes. He did not have to know the value of any individual farm. The corporation itself assumed the responsibility of properly appraising the property against which it held mortgages.

Federal Farm Loan system. In order to extend this principle and enable it to meet the need for mortgage credit in every part of the country, the Federal Farm Loan Act of 1916 was passed. Under this act there was created a Federal Farm Loan Board to consist of the Secretary of the Treasury and four others to be appointed by the president, and to have general administrative control of the system. Under this board there were created twelve Farm Land Banks, located in twelve different districts into which the country was divided, each bank to be the center of the Farm Loan system for its own district. In each district, under its Farm Land Bank, there were to be organized an indefinite number of Farm Loan Associations, to be composed wholly of farmers who desire to borrow money on mortgage. A Farm Loan Association borrows money from the Farm Land Bank of its district.

The following diagram will illustrate the general framework of the organization:


Federal Farm Loan Board
(made up of the Secretary of the Treasury and four others)
Farm Land Bank
(of which there are twelve)
Farm Loan Association
(an indefinite number)
Individual Farmer
(an indefinite number)

The twelve Federal Farm Land Banks are located in the following cities: Springfield, Mass.; Baltimore, Md.; Columbia, S. C.; Louisville, Ky.; New Orleans, La.; St. Louis, Mo.; St. Paul, Minn.; Omaha, Nebr.; Wichita, Kans.; Houston, Tex.; Berkeley, Calif.; Spokane, Wash.

There was also a provision in the Federal Farm Loan Act permitting joint-stock mortgage banks, such as were described in a previous paragraph, to come in under the Federal Farm Loan system by submitting to its general rules and regulations. A large number of such mortgage banks have taken advantage of this provision, there being twenty-five on February 15, 1921, with capital stock of $7,966,000, with bond issues aggregating something over $76,000,000, and with loans to farmers aggregating almost $78,000,000.

On December 31, 1920, the total capital stock of the twelve Farm Land Banks amounted to $24,591,515, held as follows: by the United States government, $6,832,680; by National Farm Loan Associations, $17,663,725; by borrowers through agents, $79,230; by individual subscribers, $15,880.

Total amounts loaned by the twelve Federal Land Banks up to November 30, 1920, were as follows:

Springfield	$13,550,345
Baltimore	14,732,783
Columbia	20,406,515
Louisville	27,691,200
New Orleans	25,811,705
St. Louis	30,951,675
St. Paul	49,554,700
Omaha	48,905,890
Wichita	31,531,300
Houston	40,754,766
Berkeley	18,645,900
Spokane	46,084,535
Total	$368,621,314

In order to assure a sufficient amount of capital stock it was provided that in case the total $750,000 of capital stock

of any Federal Farm Land Bank should not have been subscribed within thirty days after the opening of the books, it should become the duty of the Secretary of the Treasury "to subscribe the balance thereof on behalf of the United States." Still further to assure the Farm Land Banks a working capital, in case the public should be slow to invest in the Farm Land Bonds, amendments were passed (January 18, 1918, and May 26, 1920) authorizing the Secretary of the Treasury to purchase $200,000,000 of such bonds during the years 1918, 1919, 1920, and 1921. On December 31, 1920, the United States government held $6,832,680 of the capital stock of the Farm Land Banks. On the same date the Treasury held their bonds to the amount of $182,235,000. The total amount of the bonds authorized and issued by them was $333,784,500.

Under the operation of this act and its amendments such moneys as are secured from the sale of bonds, either to the Secretary of the Treasury or to the investing public, are loaned by the Farm Land Bank to Farm Loan Associations within its district in return for mortgages given by individual farmers to these Farm Loan Associations. The course of the money is, therefore, as follows: first, from the investor to the Farm Land Bank in exchange for bonds; second, from the Farm Land Bank to the Farm Loan Association in exchange for a batch of mortgages; third, from the Farm Loan Association to the individual farmer in exchange for an individual mortgage. The securities, however, proceed in the opposite direction: first, a mortgage is given by the individual farmer to his local Farm Loan Association in exchange for money; second, this and other similar mortgages are transferred from the Farm Loan Association to the Farm Land Bank in exchange for money; third, the Farm Land Bank deposits these mortgages under the direction of the Federal Farm Loan Board and, on the basis of these as security, issues its own bonds and sells them to the investors for money.

Exemption of Farm Land Bonds from taxation. It was provided in the Farm Loan Act that the bonds of the Farm Land

Banks were to be exempt from taxation. The purpose of this exemption was to make such bonds so attractive to the general investor as to compensate for a low rate of interest. This low rate of interest on the bonds would then enable the Farm Land Banks to accept farm mortgage notes, paying a low rate of interest, and thus the farmer would be able to borrow his money at a lower rate than would be necessary if the Farm Land Bonds were subject to taxation. Those issued prior to May 1, 1920, paid $4\frac{1}{2}$ per cent. Subsequent issues pay 5 per cent.

This provision was bitterly attacked on the ground that it was class legislation, or discrimination in favor of farmers as against other classes. The matter was under litigation for many months, but finally, in February, 1921, the Supreme Court decided in favor of the constitutionality of the act. Pending this decision, the Farm Land Banks had been unable to function. The effect of this decision will undoubtedly be to release them and permit such a development as was anticipated by the framers of the plan. It is the belief of the supporters of the plan that the Farm Land Bonds provided for under this act will prove a popular form of investment and become, in fact, one of the leading securities on the investors' markets of the country.

CHAPTER XXIX

MARKETING

One very important topic under the general subject of exchange is that of marketing. This has to do with the actual process of finding buyers for that which has been produced, or, in more abstract terms, with the bridging of the gap which separates producer and consumer.

Essentials of successful marketing. There are four essentials to the easy and successful marketing of any commodity. In the first place, it must be of good quality; that is, of the quality which is desired by the buyers. In the second place, the product must be so graded or standardized that the buyer can purchase it without inspection. The buyer of a farm product, for example, who must inspect it in order to test its quality, must necessarily waste a great deal of time and energy in the process. Time and energy are expensive. In order to save his time and do a large business at the minimum labor cost, he must insist on buying such products as have been graded and standardized so that he can order by grade and without inspection. In the third place, the product must be in some way stamped or branded, and the stamp or brand must be safeguarded as carefully as a banker would safeguard his signature or the government its seal. Any individual or association which permits inferior or ungraded products to go under its stamp or brand must eventually suffer loss, for the reputation of the stamp or brand will be destroyed, and buyers will thereafter place no confidence in it. In the fourth place, the public must be educated as to the meaning of the grades and standards and the stamps, brands, or trade-marks, in order that it may be aware of the desirability of buying without inspection and of the possibilities in that direction.

Unless the producer himself will undertake to do these four things the consumer will never consent to buy any large proportion of the product directly. The consumer will insist on saving his time, even at the loss of some money in the way of higher prices. The producer will not be able to get the advantage of these higher prices, and there will be a considerable spread between the price which the producer gets and that which the consumer pays. This spread will be absorbed by those middlemen who buy the ungraded, nondescript products directly from the producers, in a form in which the consumers do not generally want them, and then put these products into such forms as will satisfy the consumers.

Special difficulties in marketing farm produce. The marketing of farm products is the least organized and probably the least efficient part of our whole marketing system. This is probably inherent in the very nature of agricultural production. From the standpoint of production the advantages appear to be very definitely on the side of the small producer. A small farmer, being able to produce more economically than the large farmer, continues to hold the field. But he is at a peculiar disadvantage in the marketing of his own products. Even if he were able to grade and standardize his products, the difficulty of educating the public to the meaning of his brand would be insuperable. He has so little to sell that the cost of advertising would eat up the profits. To put it in another way, the public would soon become bewildered if every one of the millions of farmers of this country tried to create a special market for his own individual products.

From the standpoint of marketing, the bonanza farmer has a great advantage. In some cases (that is, in the production of certain agricultural specialties, such as fancy fruits and vegetables, breeding-animals, and race horses) this advantage in marketing is so great as to more than balance the disadvantage in production. This is probably due to the nature of an agricultural specialty. The great staple crops, on which the world must in the main be fed, are not so difficult to market as are

specialties. In the production of these great staple crops the advantage will remain probably on the side of those who can reduce the cost of production to the minimum rather than on the side of those who can market most effectively. But in the case of agricultural specialties, where marketing is more difficult, the advantage will remain probably on the side of those who can market effectively rather than on the side of those who can reduce the cost of production to the lowest point. The large producing unit can do its own grading and standardizing, can adopt its own trade-mark or brand, and can advertise more effectively than the small producing unit. This will probably keep the production of agricultural specialties in the hands of large producers, at least for some time to come. The only chance which the small farmer will have in the field of agricultural specialities will be secured through coöperation.

Coöperative marketing. It will be observed that there is very little coöperative farming in this country or anywhere else. There is a great deal of coöperation *among* farmers, especially in European countries; but this coöperation is really coöperative marketing. The farm as a productive unit is managed independently and separately, but the products of a great many farms are marketed coöperatively. This gives the double advantage of economic production in small units and efficient marketing in large units. On the whole, it looks like an ideal arrangement.

The superior bargaining power of the trust. This distinction between production and marketing will throw light on certain problems in business organization outside of agriculture. The so-called trust is primarily a marketing organization rather than a producing organization. A large number of independent companies, operating independent factories, join together for a common management. This may result in some reorganization of the work of production, but in the main it works a reorganization in the methods of selling the product, of buying the raw materials, of hiring labor, or of bargaining for transportation. It is probable that some economies are introduced into produc-

tion, but even if no economies of production were secured, the trust might succeed by reason of its superior bargaining power. If by reason of its magnitude and the perfection of its organization it can bargain for better transportation rates than independent producers can get, it may defeat them through competition. In the earlier days of the trust movement this was an important factor in its success. Again, if the trust can get control of a source of raw material or, through its organization, can bargain more effectively for its raw materials, it likewise has an advantage over its independent competitors. Or if it can secure its labor on better terms it will have another advantage. In the main, however, its chief advantage lies in its superior facilities in marketing. Having its selling organization highly perfected and its agents everywhere, it can profit by every possible fluctuation in demand and thus secure a legitimate advantage. Unfortunately it is able also to manipulate the market, to discriminate in prices between localities as well as between persons, and thus to gain an illegitimate advantage over its independent rivals. The advantages of the huge department store are likewise in the field of bargaining rather than in the field of productive service.

Social advantages of a good marketing system. There is little danger that any farmers' association will ever reach a magnitude or a perfection of organization which will permit it to discriminate in prices against certain localities or individuals. There is, therefore, little danger that it will ever be able to secure an illegitimate advantage. It may, however, reach a magnitude and a perfection of organization which will enable it to take advantage of whatever fluctuations the market shows and thus gain a legitimate profit. If, for example, in an unorganized market too much of a certain kind of produce should be sent to one city, some of it would either go to waste or be very ineffectively consumed; that is, be used for unimportant purposes. If at the same time too little were sent to another locality, there its marginal utility would be high. The total supply of the commodity would yield more satisfaction if it

were redistributed. A community which was oversupplied would lose very little by having its supply slightly reduced; whereas a community which was undersupplied would gain considerably by having its supply slightly increased. There would thus be a net gain to society through the redistribution. A large and efficient selling organization can frequently prevent such a bad geographical distribution of produce and thus avoid loss to the community. In so far as it achieves this result, it is rendering a valuable service to the nation and is entitled to profit by it.

Standardization a government function. There may be some questions as to what part the government can properly take in the improvement of marketing methods and facilities. Whatever differences of opinion may exist with respect to other functions of government, little is said or can be said against coining money and fixing the standards of weights and measures. Though these two functions are grouped together in the same clause of our Federal Constitution, it is doubtful whether it is generally realized how close is the logical connection between them. Both result in great economy of effort in the transfer of goods. The economy involved in transferring coined money rather than uncoined metal is apparent. Coining the metal merely enables it to pass from hand to hand without the labor of inspection; that is, without weighing it to determine its quantity and without testing it to determine its quality. It sells (if we may speak of selling money) on grade and reputation rather than on inspection. It is the most salable of all commodities, and the fact that it is so standardized as to make inspection unnecessary on the part of the buyer has a great deal to do with giving it its superior salability. By the same process of standardization any other commodity may approach gold coin in salability, though it may not quite reach it. At least it is safe to say that whenever it can be sold entirely on grade and reputation and absolutely without inspection its salability will be enormously increased.

Standards for measuring quantity. A short step is taken in the direction of standardizing other commodities when the state establishes uniform standards for determining quantity; that is, when it fixes the standard of weights and measures. Without some uniform system even our present methods of selling would be much more clumsy and wasteful. Every buyer would have to have his own system for determining the quantity of his purchases. This falls short, however, in two important particulars of what is accomplished when metal is coined in a modern mint. In the first place, the government actually coins the money or requires it to be coined according to its own rules, whereas in other cases it only defines the units of measurement and commands conformity to its definitions. In the second place, coins are standardized not only as to quantity but as to quality as well. There is no probability that any government will be called upon to do that which would be analogous to coining money,—actually put up other commodities in standardized packages. Something is to be said in favor of fixing standards of quality as well as standards of quantity.

Need for standards for determining quality. The reasons for fixing standards of quality, wherever it can be done, are identical with those for fixing standards of measuring quantity. They are all summed up in the superior economy of buying on grade and reputation as compared with buying on inspection. The buyer of an unstandardized commodity may have enough confidence in the seller's system of weights and measures to avoid the necessity of weighing and measuring for himself, but he can scarcely avoid the necessity of inspecting the commodity in order to determine its quality. In some cases the determination of its quality is easier than that of its quantity, but in other cases it is not. In all cases where quality can be standardized, there is economy of effort. So far as buyers can be saved the trouble of inspection, so far will they be enabled to economize the time and effort involved in making purchases and so far also will the salability of commodities be increased. Whether

this will reduce the cost of getting the standardized commodities from producers to consumers, or merely enable the consumers to use their time more advantageously to themselves, may be open to question, but the ultimate economic effects are much the same in the two cases.

Need of expertness in buying supplies. Not the least among the advantages of a minute division of labor is the fact that each individual can avoid the necessity of being expert in many things and therefore has time to become a specialist in one thing. One of the advantages of the standardization of commodities is that the average consumer can avoid the necessity of being an expert judge of the many articles which he has to purchase. He may therefore utilize his time and mental energy in his own special field of work. There is, to be sure, something attractive in the custom of the well-to-do burgher's going to market and selecting with the eye of a connoisseur the various articles needed by his household, but it is wasteful of time and mental energy. When he or his housekeeper is able to order by telephone, without any inspection whatever, and still get what he wants, more time is left for other things.

This will help to explain two very distinct tendencies in present-day retail-marketing methods. The first is to put up more and more articles in standardized packages. The second is to place more and more dependence upon the retailer, who, in many cases, is coming to regard his customers as clients to whom he is bound to give his own expert service. Both tendencies are designed to save the consumer the trouble of becoming an expert buyer and to leave him more time for other things. Neither tendency has as yet reduced the cost of getting products from producer to consumer. If the consumer utilizes the time saved in marketing by doing work which earns him a larger income with which to purchase goods, it perhaps does him as much good as it would if these tendencies merely reduced the price of commodities.

Marketing by telephone an American habit. Marketing by telephone is peculiarly an American habit. This may in part

explain and in part be explained by the fact that two thirds of all the telephones in the world are in the United States and three fourths of them are in the United States and Canada. This habit makes it more and more difficult for the householder to inspect her purchases. She is, therefore, more and more driven to one of the alternatives mentioned before. She must order well-known brands, which are put up in standardized packages, trade-marked, and sold on grade or reputation, or else she must rely on her grocer or her marketman very much as she does on her physician, her lawyer, or her financial adviser. The quality of dependableness becomes, therefore, more and more important in the grocer and the marketman. Such qualities have to be paid for. Thus the householder saves time, but pays for the privilege.

If she buys standardized goods in standardized packages she will usually pay from 50 to 100 per cent more than she would if she bought in bulk and did her own inspecting and selecting. If she relies, as a client, upon the honesty and expertness of her grocer and her marketman she must pay for that. Honest and capable experts do not have to live on small incomes anywhere, and when they go into the business of selling produce they will charge for their services.

Standardization should take place early in the marketing process. One reason why these tendencies merely save the time of the consumer instead of reducing the cost of getting the products to him is that the standardization takes place only in the last stage of the process; that is, just before the commodities reach the consumer. In order to reduce materially the spread between the price which the producer gets and that which the consumer pays, standardization must take place early in the process. This will enable the standardized article to go through the channels of trade at a lower cost. If it has to be inspected every time it changes hands the process is expensive and someone must pay the cost. Some products apparently cannot be standardized, so there must always be a wide spread between the producers' and the consumers' prices.

A good illustration of the effect of standardizing a product early in the process of getting it from the producer to the consumer is found in the marketing of certain kinds of Western fruit. They are graded and standardized as soon as they leave the orchards. All subsequent inspection is therefore unnecessary and the cost of getting them to the consumer is reduced practically to the physical cost of haulage and handling. This has notably reduced the spread between the two prices. Many other commodities, such as wheat, cotton, pig iron, and coal, are sold largely on grade rather than on inspection. In these cases the government has had very little to do with the standardization. Two recent acts of Congress, however, have brought the government definitely into this field as the fixer of standards of quality. These are the Cotton Futures Act and the Grain Standards Act. Both give the Secretary of Agriculture power to establish grades and to enforce their use in the regular channels of trade. A number of states have also passed grading laws of various kinds. Four New England states have passed a uniform apple-grading law, defining the contents of a standard barrel, describing the various grades of apples, and imposing penalties upon all departures from the standard prescribed.

Such legislative acts cannot be called in any true sense interferences with trade. They are designed to increase the freedom with which commodities may circulate. They are somewhat analogous to the work of the traffic policeman on a crowded corner. He may exercise authority and interfere occasionally with an individual's movement, but the result of his so-called interference is greater freedom of traffic.[1]

Brands and trade-marks. Brands, trade-marks, and other selling devices of this general description would be useless or impossible without some kind of standardization in production or grading of products. Where these services are properly used, they are an aid to the buyer as well as to the seller. They

[1] Compare the article by the author, on "Standardization in Marketing," in the *Quarterly Journal of Economics*, Vol. XXXI, No. 2, pp. 341–344.

help him to know what he is getting and enable even the inexpert buyer to buy safely.

Advertising and salesmanship. From the point of view of the seller of any commodity there is not much doubt as to the efficacy of advertising and expert salesmanship. Serious doubts have been expressed, however, as to the social advantage of what may be called high-pressure selling. Why, we are asked, should we be subjected to all the arts of the expert salesman and advertiser, who are doing their utmost to persuade us to spend our money for things which we do not need? On the other hand, it is replied, why should not every art of persuasion known to the expert be brought to bear upon men to lead them to do what they ought to do? This is what evangelism, moral leadership, and all sound instruction amounts to. If we are to allow freedom in the exercise of the arts of persuasion at all, it will be difficult to draw the line. Who shall act as our censor and permit one man and forbid another to persuade people to do what he wants them to do?

Except in extreme cases this argument is unanswerable. In the case of immoral acts, or any act which the moral sense of the community condemns, it is obviously as immoral to persuade people to commit those acts as it is to commit them. If there is anything which men clearly ought not to buy, it is equally clear that men ought not to advertise it or try to sell it. But the difficulty, except in extreme cases, is to decide just what things it is proper, and what it is improper, to buy.

It is quite clear, however, aside from all questions of legal conduct, that much of our advertising is a waste of human energy. Sometimes it is a service to a consumer to apprise him of the fact that he can buy something which he has long wanted and to tell him where it can be had. In most cases, however, advertising serves no such purpose. One does not need an advertisement to apprise him of the fact that soap can be purchased. The only purpose served, in all such cases, is to persuade people to buy one brand rather than another. Our helplessness in such a situation is revealed to us when we consider

that it would take a great deal of campaigning, accompanied by advertising and high-pressure persuasion, to work up a public sentiment hostile to advertising. We might easily waste more energy in this campaign than is now wasted in advertising.

Political campaigning. Socialists are in the habit of pointing to the wastefulness of advertising as one of the costs of competition. They do not point out, however, that a political campaign is just as wasteful as a selling campaign. The candidate for office advertises his candidacy and uses high-pressure persuasion to get people to vote for him. Since the extension of government power and authority would multiply government offices, it would necessarily multiply the number of campaigners and greatly increase the waste of time and energy used up in political campaigns. Every campaigner, even he who is campaigning for socialism, is doing much the same kind of work as is done by the expert advertiser. He is using high-pressure persuasion to get men to do things which they would otherwise not do.

It looks as though we should have to regard persuasion in all its aspects, except persuasion to do that which is morally condemned, as a necessary cost of freedom. A despot could suppress all persuasion, in politics as well as in salesmanship, but a free people can scarcely get along without it. Freedom is in some respects costly, but it is worth all it costs.

CHAPTER XXX

ECONOMIC CRISES

Financial crises. One of the most important and most puzzling of all modern economic questions is that of the frequent recurrence of financial crises and general industrial depressions. A financial crisis is an occasion when the money market becomes suddenly demoralized, confidence disappears, and credit shrinks. Everyone to whom money is owed wants it at once, but no one wants to let go of any money in his possession for fear that he may not be able to get any more. Besides, there does not seem to be money enough to pay off existing debts.

In the chapter on Banking it was pointed out that a large part of the business of the world is done on credit, without the actual handling of money. If you will imagine a group of men doing business with one another, where each one trusts every other, you will see that a large amount can be done with a ridiculously small amount of money. Many transactions will be carried on by means of promises to pay money instead of with the money itself. Many of these promises will be balanced against one another and canceled without the use of any money. In other cases the money will be used merely to pay the balances. But if something should happen to destroy their confidence either in one another or in the continuance of prosperity, the maintenance of price levels, the productivity of labor, or anything else upon which business depends, so that no one would accept promises, but everyone demanded real money, there might not be money enough to go around and make the necessary payments. In that case business would have to slow down, and only as much business could be done as could be transacted with the small amount of money available. If in

addition to this everyone held on to all the money he could lay hands on, for fear that he might not be able to get any more, even the limited amount of money in circulation would move slowly, and business would have to slow down correspondingly. A swift dollar may pass from hand to hand many times in a day and in this case do a large amount of business, but a slow dollar passes from hand to hand only a few times a day and does a small amount of business.

Industrial depressions. An industrial depression is usually more deep-seated than a financial crisis and usually lasts for a longer time. It is a general stagnation of production because of inability to get satisfactory prices for products. Various explanations, some intelligent and some absurd, have been offered. Overproduction is one of the most common and least intelligent. There may be such a thing as disproportionate production, but such a thing as general overproduction is a physical impossibility. The production and supplying of one thing is a demand for something else—the more production, the more demand; but if some things are produced and offered for sale, and there is no demand for them, it means either that those few things are overproduced or that the other things which might be exchanged for them are underproduced.

The overproduction theory. One phase of the overproduction theory of industrial depression is that wages are so low that the laborer is not able to buy his own products. It is argued that this results in an overproduction and a glut on the market. There are many excellent reasons why wages should be higher than they are, but this is not one of them. So far as its effect on the general purchasing power of the community is concerned, it makes no difference whether wages are high and rent, interest, and profits are low or whether wages are low and rent, interest, and profits are high. If the laborer gets a small share of the production of a given industry, and the managers, landowners, and capitalists get a large share, these have a large purchasing power and the laborer a small purchasing power. The value of the whole product of every industry

goes to these various classes, and they have it all to spend. If one class possesses a large share, and another class a small share, the total amount to be spent for other commodities is not affected by that distribution. If the laborers get absolutely the whole product of an industry, there would be no more to spend on other products than if the laborers got one half the product and the other participants got the other half. This, let is be repeated, has nothing to do with other and excellent reasons why wages should be high.

The periodicity theory. A certain periodicity has been observed in the recurrence of crises and depressions. It is not always easy to determine just the interval that elapses between depressions. Sometimes they come approximately twenty years apart, but they have a disconcerting habit of coming at unexpected times. In his book on "Economic Crises" Jones gives the following table:[1]

LIST OF ECONOMIC CRISES

United States	England	France	United States	England	France
—	1792–1793	—	1847	1847	1847
—	1796	—	—	—	1855
—	—	1804	1857	1857	1857
—	1810–1811	—	—	1866	—
1812	—	—	1869	—	—
—	—	1813	1873	1873	1873
—	1815	—	—	—	1882
1818	—	1818	1884	—	1884–1885
1825	1825	1825	1890	1890	1890
—	—	1830	1893	—	1893
1837–1839	1836–1839	1836–1839			

In the nineteenth century it will be noticed that there were severe crises in 1818, 1837, 1857, with lesser crises in 1825 and 1847. The severe crises seemed to come every twenty years for almost half a century. Again, there were severe crises

[1] Edward D. Jones, Economic Crises. The Macmillan Company, New York, 1900.

in 1873 and 1893, with a less severe one in 1884. Another one occurred in 1907.

Various attempts have been made to explain this apparent periodicity. The late William Stanley Jevons developed an interesting theory of the coördination between sun-spot cycles and industrial depressions. The sun-spot cycles, he argued, have a profound effect on the weather, rainfall, etc., and these in turn affect the agricultural basis of the world's wealth. This theory, however, had not been taken seriously by the economists until it was recently revived by the interesting observations of Professor Ellsworth Huntington. It is true he has not developed the theory at great length as applied to economic crises; but he had presented strong evidence in favor of the doctrine that solar disturbances profoundly affect climatic conditions and rainfall, and that these in turn have produced great historical and economic disturbances.[1]

Meanwhile the question Why do we have business depressions? remains unanswered, and it is now being asked with a new insistence. It is about as hard to answer as the question Why is there sickness? There are, however, a few things that may be said about depressions that may help to an understanding. In the first place, they are associated with free buying and selling; in the second place, they are associated with the free use of credit; in the third place, they are associated with speculation.

If all buying and selling were prohibited and industry were carried on like a military campaign, everybody working under orders and receiving his rations and other supplies from military stores, there would be no industrial depressions of the kind we now know, though there would certainly be worse things. If we decide to retain the system of free buying and selling we shall always run the risk of unevenness or irregularity in the rate of buying. If people buy at irregular rates, there must

[1] Ellsworth Huntington, "Climatic Changes and Agricultural Exhaustion as Elements in the Fall of Rome," *Quarterly Journal of Economics*, February, 1917. See also "The Pulse of Asia," Houghton Mifflin Company, Boston, 1907.

of necessity be irregularity in the business of merchandising and producing. Fads and fashions alone introduce elements of uncertainty and irregularity into the buying of goods. Besides, there are times when people spend their money more freely than at other times. This free buying at one time and slow buying at another adds a further element of uncertainty and irregularity and makes it certain that business will be more active at one time than at another.

If no buying were ever done on credit, there would still be some irregularities in buying, but they would be much less frequent and less extreme than when credit is largely used. People might spend their money at one time as fast as they could and at another hold on to it a little longer, yet so long as they are spending real money and paying cash for what they get, these irregularities will not be so very great. But when men suddenly find that their credit is good and they begin buying increasing quantities on credit, they are, for a time, spending money faster than they get it or, more accurately, buying goods faster than they can pay for them or faster than their individual incomes will warrant. This accelerated buying makes business abnormally active. If credit were not elastic, and men were making practically the same use of credit at one time as at another, buying would soon settle down to a normal rate. But a few failures will tend to destroy confidence. Men find that they cannot buy as much on credit, or they grow cautious and decide not to make use of their credit; and this results in abnormally low buying. During this period even those whose normal incomes have not been reduced find that they must spend less than their total incomes for new goods, being compelled to spend a part of this year's income in paying for goods that were bought last year. This means that they must of necessity spend less for this year's goods, whereas during the period of credit expansion they were buying more than their incomes would warrant. During this period of credit contraction they cannot buy as many new goods as their incomes would warrant because they are

still paying for old goods. This makes a vast difference in business activity.

When not only consumers but merchants, manufacturers, farmers, and investors are buying on credit and expanding their credit, business expands at an astounding rate; but when they all stop buying new commodities in order to pay for the old ones, there is no demand for new stuff and business slows down at an equally astounding rate.

As to speculation, when prices are tending upward and it is the belief that this tendency will continue, everyone is tempted to speculate, at least in an apparently mild and harmless way. If there is something that we shall need later on and the price is likely to go higher, now is the time to buy. When we act on this impulse we accelerate our rate of buying, for a time at least, and this tends to send prices still higher, this, in turn, tempting us to still more speculation. When, however, we get stocked up, buying comes back at least to normal. When prices start downward, as they are likely to, the opposite tendency shows itself. If we think that prices are going to be lower we have a reason for postponing buying and for not only using up our old stocks but waiting as long as we can before renewing. This results in an abnormal retardation in the buying of new goods.

When, instead of this mild and harmless form of speculation, we have men buying large quantities of commodities for the sole purpose of selling again when the price rises, the irregularities of the market are still further exaggerated. When prices are going up every speculator wants to buy and no one wants to sell. This excess of buyers over sellers accelerates the rise in prices. When prices start downward every speculator is a seller and no one wants to buy. This, in turn, accelerates the fall in prices.

We may be able to repress some of the wilder forms of speculation, but it is difficult to see how we can prevent those who need goods from buying when the price suits them. We may be able to restrict somewhat the overexpansion of credit, but

it is difficult to see how men can be prevented from buying some things on credit, provided they can find others who will trust them. Finally, it may be possible to restrict somewhat the field of free buying and selling and to enlarge that of authority and obedience, but it is difficult to see how all buying and selling can be prevented. We may, in other words, find ways of decreasing the violence and frequency of business depressions, but we cannot eliminate all irregularities of demand among free buyers and sellers. These irregularities of demand with the resulting irregularities in business activity are among the penalties we shall have to pay for the privilege of buying what we like and when we like it.

There come times, however, when, for reasons but vaguely understood, a veritable fever of speculation takes possession of a community. When this happens the prices paid for the articles in which people are speculating do not bear any logical relation to the real values. The speculator will pay any price for anything, provided he thinks he can sell it later at a still higher price. When prices are tending rapidly upward he may rely on the mere momentum to carry them higher. There is only one possible outcome of this tendency—a rapid fall in the prices of the commodities in which men are speculating.

Even though the speculation take place in a single article, it may produce a profound economic disturbance. The money that is absorbed in the speculative purchasing of the article in question is necessarily withdrawn from other kinds of business. This in itself produces some disturbance. When a fall in prices begins, a general bankruptcy among the speculators takes place. When a number of men become bankrupt and are unable to pay their obligations, a process begins which may be compared to knocking over one brick in a row of bricks standing close together. The falling of one brick knocks over the one next to it, and so on until the whole row falls. Accordingly, if one individual who owes money to another fails to pay his debt, the latter, not being able to collect his money, fails to pay his obligations to a third, and so on; one after another fails, and the

bankruptcy spreads throughout the community in a sort of wave motion. A depression always follows a speculative mania of any kind, whether it be a real-estate boom or a boom in Shorthorn cattle, Belgian hares, or French bulldogs. This has led to the sage remark that "the echo of a departed boom is the saddest sound in nature."

The real-estate boom. The wave of speculation in land which is known as a real-estate boom is one of the most interesting and instructive of all subjects of economic study. No one has ever been able to explain just how it starts, but after it has started, it is not so difficult to understand. Something happens, let us say, such as the building of a new railroad, the opening of a new mine, or the location of a new factory, to produce a very rapid rise in the price of city lots. Men double and quadruple their money in a short time by merely buying and selling again at a higher price. This sets them and others crazy. Everyone wants to buy lots for the purpose of selling again. The first effect is to increase greatly the number of buyers, and the effect of this is to send the prices still higher. These buyers, as a consequence, also make money rapidly. This attracts still other buyers, some of them coming from long distances to share in the harvest. So long as buyers are increasing faster than sellers, prices continue to go up; but when the buyers become less numerous than the sellers, which must inevitably happen, prices begin to fall. Suddenly everyone becomes a seller, and there are no buyers at all. Stagnation, depression, bankruptcy, and general ruin ensue.

The recovery is very slow. The men who are left with land on their hands are not fitted to use it. They did not want it for use; they wanted it only to sell. This means an inefficient use of the land. Besides, even those owners who are fitted to put the land to an economic use are handicapped because they put too much money into the land and have too little with which to develop or use it. Those who were lucky enough to sell out in good time are very careful not to let go of their money or to

invest it in productive industry. Years usually elapse before the city recovers from the disaster.

Speculation in farm land, in railroads, in mining, as well as in Belgian hares, tulips, and Shorthorn cattle, has produced a number of historic depressions of this kind.

The overinvestment theory. There are, however, even more fundamental and far-reaching reasons than these for a certain tendency to overinvestment in certain special lines of industry. Overinvestment may produce very much the same results as overspeculation, though they are not likely to be so acute or so sudden in their appearance.

Overinvestment in the railroads of the Far West is supposed to have had something to do with the panic of 1857. The money was spent, the railroads were built, and then it began to appear that it would be some years before there would be business enough to put the railroads on a paying basis. Meanwhile all that capital had been diverted from other industries, which suffered in consequence. In many cases, however, the shares of the new railroad enterprise had been bought on credit. As soon as it appeared that dividends were not speedily to be forthcoming, the value of the shares fell rapidly, and those who had invested on credit in many cases suffered bankruptcy.

There is something also in the very nature of modern industry which seems to render it highly sensitive. The countries which show the largest amount of enterprise and the adventuring spirit not only expand most rapidly but also, at the same time, seem to have the largest number of industrial depressions. The tendency to rush headlong into new enterprises is doubtless an important factor in national expansion, but it also produces a severe reaction when this headlong spirit rushes too far in a given direction.

One characteristic of a modern industrial community is the proportion which producers' goods hold to the total wealth. This means that a large part of the wealth is in forms which have no utility in themselves but which derive their utility from

the goods which they help to produce. A satisfactory explanation of industrial depression must, in the opinion of the author, be sought in the laws of value which govern investment in this class of goods, rather than in the conditions of the money market or those of organized credit.[1]

Violent fluctuations of the value of producers' goods on the investors' market. Let us begin by noticing a few elementary facts. Every farmer knows that a horse which will not earn more than his feed, or a piece of land which will not produce more than it costs to cultivate it, is of no value. Likewise every business man knows that an establishment that cannot be made to pay more than running expenses is worth nothing except as old iron. This is equivalent to saying that the value of such an establishment—or, indeed, of any productive agent—is determined not by the total value of its product but by the excess of that total value over and above the running expenses. When the running expenses are high and the output is large, so that the earnings depend upon small profits and large sales, a very slight rise in the value of the product may double or more than double the value of the establishment, provided, of course, that the rise in value is believed to be permanent. Let us suppose that a certain shoe factory can be made to turn out 100,000 pairs of shoes in a year at a uniform cost of $8 a pair. If these shoes cannot be sold at more than $8 a pair the plant is worthless, but if they can be sold at $8.25 a pair the earnings of the plant will be $25,000, which, capitalized at 5 per cent, will make it worth $500,000. If, however, the price of shoes should rise to $8.50 the earnings of the plant would be doubled, and if this rise in value were believed to be permanent the value of the plant would be doubled. Thus an increase of only one thirty-third in the value of the product would double the value of the plant. In the same way, a subsequent fall of one thirty-fourth in the value of the product would reduce the value of the plant by one half, while a fall of one seventeenth in the

[1] See "A Suggestion for a Theory of Industrial Depression," *Quarterly Journal of Economics* (May, 1903), p. 497.

value of the product would destroy the value of the plant altogether. This may be stated as a general law to the effect that a slight fluctuation in the value of a product tends to produce a violent fluctuation in the value of the establishment producing it. Stated in still more general terms, the value of producers' goods tends to fluctuate more violently than the value of consumers' goods.

This law is capable of still further extension when we consider that producers' goods are themselves produced by other productive agents. The different parts of the shoe factory of the above illustration were produced in other factories, and the fluctuations in the value of the shoe factory would tend to produce still more violent fluctuations in the values of the establishments producing the different parts, for the same reasons as were given above. The law might therefore be extended so as to read, The farther removed the producers' goods are from some consumable product, the more violent the fluctuations in value tend to be.

This would be the tendency until that stage was reached where the producers' agents were no longer especially connected with one particular line of production and were not, therefore, affected merely by changes in price of the one kind of consumable product.

It must be admitted that the fluctuations in the value of producers' goods were never actually so violent as the foregoing illustrations have supposed, mainly for the reason that not every rise or fall in the value of products is believed to be permanent. But where the high or low price of a product continues for some time it invariably leads to a belief that it is likely to continue, and this raises or depresses the price of the productive agent out of proportion to the rise or fall in the price of the product.

In this connection it is well to observe that while the immediate demand for consumers' goods comes from consumers themselves, the immediate demand for producers' goods comes from investors. Since their willingness to invest depends not

upon the value of the gross product of the productive agent but upon the excess of that gross product over and above the cost of using the agent,—which excess has been shown to fluctuate more violently than the total value,—the instability of the investors' market is therefore not altogether due to psychological changes on their part, but in a large degree to the objective causes which affect the value of the things in which they invest.

A slight rise in the price of consumers' goods will so increase the value of the producers' goods which enter into their production as to lead to larger investment in producers' goods. The resulting large market for the latter, again, stimulates the production of such goods and withdraws productive energy from the creation of consumers' goods. This for the time tends to raise the price of consumers' goods still higher, and this, again, to stimulate still further the creation of producers' goods. There is no check to this tendency until the new stocks of producers' goods begin to pour upon the market an increased flow of consumers' goods. This tends to produce a fall in their value, which in turn produces a still greater fall in the value of producers' goods; and so the process goes. There seems, therefore, to be a fundamental reason for the periodicity of industrial depression, which can be removed only by such a complete knowledge and understanding of the situation as would enable the business world to foresee the tendencies and take measures to overcome them.

These observations regarding the law of value as applied to different classes of goods may throw some light on the relative stability in the price of a consumable article, such as sugar, in comparison with the price of such an article as steel, which belongs chiefly to the class of producers' goods several steps removed from consumers' goods. The market for sugar is mainly a consumers' market, while the market for steel is mainly an investors' market. A consumers' market depends upon the willingness of the public to consume, while an investors' market depends upon their willingness to invest. As was

shown above, there are reasons, other than psychological, why an investors' market must be more unstable than a consumers' market.

Even consumable commodities are sometimes affected by a speculative tendency; in other words, consumers themselves sometimes speculate a little in the goods which they buy for their own direct consumption. When prices are tending upward and it is expected that they will continue upward, there is a distinct tendency to accelerate buying. The consumer foresees that he must sooner or later buy sugar, shoes, clothes, coal, and furniture. Since he must buy them anyway, and the price is probably lower now than it will be later, he reasons that he might as well buy now. If he does not reach this conclusion by his own unaided reasoning, some dealer is usually willing to aid him by supplying arguments in favor of buying at once. When consumers generally begin thus to accelerate their buying it tends still further to stimulate the rise of prices. This, in turn, furnishes a still stronger reason for early buying before prices get any higher, etc. But acceleration cannot go on indefinitely. Sooner or later everybody is stocked up, and even though one continues to carry a full stock of all necessary supplies, his *rate* of buying becomes normal. The rate accelerates only while he is increasing his stocks. When he stops increasing them he stops increasing his purchases in the immediate present and therefore stops furnishing a further stimulus to a further rise of prices.

On the other hand, when the upward tendency of prices has exhausted itself, and it begins to appear that prices are likely to fall, there is a distinct tendency to retard the buying even of necessaries. If prices are coming down everyone who can postpone the buying of anything has a good reason for so doing. Those who stocked up during the period of rising prices can now use up their stock and thus postpone further buying. This, in turn, retards and reduces the effective demand in the immediate present. This tends still further to hasten the fall of prices and this, in turn, furnishes a still stronger reason for

postponing buying as far as possible, etc. After a time all the old stocks are used up and, as there is no opportunity for further postponement, buying becomes normal again. It is fortunate if the prices do not start violently upward again, thus starting another cycle.

These two tendencies—to accelerate buying when prices are believed to be rising from a low to a high level and to retard buying when they are believed to be falling from a high to a low level—not only affect consumers but dealers as well. Altogether they help to account for those periods of feverish prosperity and chilly depression which are so noticeable in modern times. They seem to be a necessary accompaniment of any system of free buying and selling. At least, no one has ever suggested a method of preventing their recurrence without stopping the processes of free buying and selling and substituting some sort of rationing process under which production and distribution would be carried on under a system of authority and obedience rather than under the system of free bargaining.

Let it not be too hastily assumed that there is no way of preventing these recurring business depressions. There is a remedy for every economic evil. The only question is whether we are willing to pay the cost of the remedy. In other words, the question is whether the evil to be remedied is great enough to justify the cost of the remedy. There are a great many things in the world that ought to be reformed, from spelling up to clothes, but most of them are not important enough to justify the trouble it would take to reform them. We must first decide whether these recurring cycles of trade with their business depressions are worth reforming. Nothing should be taken for granted without careful investigation. It is not impossible that more progress is made over long periods of time under these cycles of rapidly increasing business activity, rising prices, and general prosperity, followed by decreasing business activity, falling prices, and general depression,

than we should have with constant business activity, stable prices, and uniform prosperity.

Let us begin with one or two analogies, which, of course, do not prove anything, though they may suggest possible conclusions. Probably every farmer in the temperate zone would say, if asked suddenly, that it would be a good thing if the cycle of the seasons could be eliminated so that we could have summer all the time. It doubtless seems unfortunate that there should be a winter season when no plants grow and when live stock have to be fed with stored-up hay and grain. And yet if he observes widely he will find that the greatest agricultural prosperity and progress are seen in precisely those zones where the cycle of rapid plant growth followed by a dormant period is most marked. Not only do the forces of plant growth seem to work with a new vigor after the winter's torpor but man himself seems to take hold of the spring work with a zeal and enthusiasm that would be difficult to maintain the year round if there were no seasons. Again, when one is out in the woods, one is not usually worried lest a tree or a branch should fall on him, in spite of the fact that he sees all around him evidence that trees and branches have fallen. One reason is that all the trees and branches that were weak and ready to fall were blown down in the last storm. Those which weathered that storm are not likely to fall until the next one. It is not impossible that a large part of what we call business confidence, on which so much of our business prosperity depends, is due to the fact that all the important business houses and financial institutions that were weak enough to fail were eliminated in the last depression. Those which weathered that crisis are not likely to fail now nor until they develop weakness or unsoundness, which will be tested by the next crisis. Meanwhile we have enough confidence in the general economic conditions to justify us in starting new enterprises. This tends to unusually active business and the development of many new enterprises which, in turn, call for another testing period later on. This may so increase

the effectiveness of the general process of trial and error, variation and selection, wholesale experimentation and severe testing (which is the only method by which progress comes in any field), as to give us more progress in the long run than we should have if things ran along at a uniform rate. In short, until we are more certain than we can now possibly be that it is desirable to eliminate economic crises, we would probably do well not to dabble too much with remedies. Nevertheless remedies may be applied if we care to pay the cost of them.

Periods of depression are assumed to impose special hardships on laborers. Yet it is an observed fact that wages rise during a period of special business activity and that it is very difficult to reduce them during periods of depression. Though there may be some reduction they seldom go back to the old level. The process of forcing wages up during periods of expansion and holding them up during periods of contraction probably does more for labor in the long run than could be done if there were no periods of special expansion and contraction.

In the chapter on The Purchasing Power of Money it was pointed out that prices could be stabilized by several methods. This would, in itself, go a long way toward stabilizing business. Few things so stimulate business activity as rising prices, though rising prices and abnormal business activity are generally joint results of active buying. To prevent prices from rising would have a dampening effect on business expansion. Falling prices, on the contrary, discourage business activity. To prevent their falling would remove the discouragement. When prices rise because of abnormally active buying by consumers, the most effective way to prevent their rising is to retard buying; when they fall because of slow buying by consumers, the most effective way to prevent their falling is to stimulate buying.

CHAPTER XXXI

FREE TRADE

Advantages of exchange among individuals of the same country. Freedom of exchange between individuals is so clearly advantageous that practically no one advocates serious restrictions upon it. Freedom of trade between different sections of the same country also is generally approved. It would seem absurd for the South, which is peculiarly adapted to cotton, to try to be entirely self-supporting and, especially, to produce certain things, such as wheat, for which its soil and climate are not so well suited as are those of other sections of the country. No one would seriously advocate an interference with the shipments of wheat and wheat flour to the South or of cotton to the North.

Advantages of exchange among individuals of different countries. It is argued by a large majority of the students of economics that the same arguments which favor a policy of freedom of exchange within the country are equally in favor of freedom of exchange between different countries. The lines which separate one country from another are frequently arbitrary political boundaries and do not necessarily interfere with the channels of advantageous commerce. These students would hold that there is no more reason why there should be an interference with freedom of trade across the St. Lawrence and the Great Lakes than across the Ohio River or the Mississippi. If there are individuals in Canada who desire products from the United States, and individuals in the United States who desire products from Canada, there is no more reason why they should be forbidden to make the exchange than there is why two citizens from different states of the United States should be forbidden to exchange their products.

The diversion of labor and capital from the more productive into the less productive industries. The positive argument in favor of freedom of trade rests upon one or two fundamental propositions. One of these is that the labor and capital of any region tend of themselves to seek those opportunities and to develop those industries which are most profitable to themselves. From this it would follow that any interference with this process, or any attempt to develop an industry in a region where it would not develop without special favors, must necessarily be a mistake. It would merely divert labor and capital from the more productive to the less productive industry. Left to themselves, labor and capital in the southern part of the United States will go into the growing of cotton without any governmental encouragement. This is a sign that cotton-growing is one of the most productive opportunities of that region. Any attempt to tax cotton-growing, and out of the proceeds to pay a bounty to some other industry, would mean merely that a certain amount of the labor and capital of the South would be diverted from the cotton industry, in which it is most productive, into an industry in which it would be less productive. If the new industry is not less productive, labor and capital would go into it anyway; if it is less productive, it would be a waste of resources to divert labor and capital into it instead of allowing them to go where they would naturally go.

Against this fundamental proposition of the free-trade school the protectionists have never been able to launch a successful frontal attack. They have, however, attacked the policy of free trade at other points. The arguments which they have been able to use have, on the whole, proved somewhat more popular than this severely simple doctrine on which is based the free-trade argument. There are six popular arguments in favor of protection, besides some others that are not so popular, though perhaps of greater scientific weight. These six arguments may be characterized as follows: (1) the balance-of-trade argument; (2) the home-market argument; (3) the infant-industries argument; (4) the standard-of-living argu-

ment; (5) the antidumping argument; and (6) the necessity-for-military-supplies argument.

The balance-of-trade argument. By the balance-of-trade argument is meant the old theory that a nation is rich when it sells abroad more than it buys. There is a certain superficial analogy between the condition of the private individual and that of the nation. It looks at first thought as though the private individual who is selling more than he is buying were getting rich. This, however, is only an appearance. It is true that so long as he is selling more than he is buying he is accumulating money, but unless he invests that money sooner or later, it will do him no good. When he invests he is really buying something with it; otherwise he merely becomes a miser and hoards his money instead of using it. The individual who saves or who accumulates money for a time, say for a year, may be prospering in the sense that he is accumulating the power to purchase something else later on; but suppose that during the next year he invests all the accumulations of the preceding year: then it will happen that during this next year he will be buying more than he is selling. No one will contend that he grows poorer by the process.

Similarly with the nation that continually sells more than it buys: if it never buys anything from the outside with this surplus, the money is of no use to it; if it merely keeps it in circulation within its own boundaries, it will have more money in circulation, but no more goods. Sooner or later, however, this process must come to an end, for if prices continue to rise within the country, it becomes a poor country in which to buy products. Foreign buyers will, so far as possible, go to other markets for their supplies. At the same time it becomes a good country in which to sell. Foreign producers will seek to sell their goods within the country where high prices prevail, and if the prices are high enough the protective tariff ceases to be a hindrance. The combination of these two processes would speedily drain some of the surplus money out of the country; that is, when foreign producers sell large quantities to the coun-

try, and foreign buyers purchase small quantities, there must come an equilibrium in prices so far as the commodities which enter into international trade are concerned. There are some commodities and services which do not enter into international trade, and the prices of these may remain on different levels for considerable periods of time.

During the first year or two of the World War, which was inflicted upon an astonished world by the Turco-Teutonic powers, Americans had an excellent illustration of the fallacy of the balance-of-trade argument. We immediately began selling vast quantities of supplies to the Allies, who were defending themselves against attack and invasion. Their productive power was diverted from the field of industry into the field of war, so that they had very little to sell to us. The consequence was that vast amounts of money had to be sent in payment for the supplies which we sent to them. It looked for a time as though we were prospering amazingly by this process. Money was very abundant, but goods were becoming scarce. It was not long before the people began to realize that they could not live on money,—that, after all, goods were what they wanted. Some relief came when the United States began to lend the money back to the Allies, so that they could purchase more and more supplies; that is, some of the surplus money, instead of being used in the purchase of ordinary commodities, was used in the purchase of foreign securities, including the bonds of foreign governments.

Nothing could be more elementary or more incontrovertible than that every country must in the long run pay for its foreign supplies with its own products. If it happens to produce gold and silver in large quantities, these must of course be reckoned among its own products, and it may pay for a portion of its foreign supplies with this gold and silver. In the long run, therefore, the country that restricts importation must necessarily and in exactly the same degree restrict exportation.

The home-market argument. As to the home-market argument, this has been peculiarly effective with farmers. It has

been pointed out to them that unless factories are built in their own neighborhood, they must depend upon distant markets for the sale of their products. To sell their products in these distant markets and get their own supplies back, it is said, involves heavy expenses in the form of freight rates. If these expenses, however, were so heavy as to overbalance the other advantages and disadvantages involved, manufacturing would be developed in the home market without any government aid or interference. If, for example, the difference in the cost of growing wheat in Alabama and North Dakota were less than the freight rates from North Dakota to Alabama, Alabama would find it advantageous, without any government help, to grow her own wheat; but if it costs, let us say, twenty cents more per bushel to grow wheat in Alabama than in North Dakota, and the freight rate is only ten cents, then it would be very much more profitable to import wheat or wheat flour from North Dakota.

The same principle would apply to manufacturing products. If the difference in the cost of manufacturing a yard of cloth in Kansas and in New England is less than the freight rate from New England to Kansas, some cotton manufacturer would be pretty certain to locate his business in Kansas in order to save that freight rate; but if the difference in the cost of production is greater than the freight rate, then it would be a mistake to encourage the manufacture of cloth in Kansas. This principle would apply between different countries as well as between different sections of the same country. The home market, in short, is preferable to a distant market only when, with a given amount of productive energy, more can be produced by saving transportation than can be produced even when goods have to be transported over long distances.

The infant-industries argument. As to the infant-industries argument, there is undoubtedly something to be said on the side of protection. The argument is good, however, only on condition that the infant industry, after it is once established and ceases to be an infant industry, is then able to take care

of itself without further protection. If it is not, and if it continually needs protection, the policy is one not for the protection of infant industries but for the protection of those that are in a state of senile decay. It is a policy for keeping alive industries that ought to be dead.

There are two rather fundamental objections to a protective policy based on the infant-industries argument. In the first place, no matter how much protection is given to any industry, there will always be certain establishments that are just on the margin of bankruptcy. There will be men who are so poorly qualified for managing a business or who have located their businesses in such disadvantageous places that they have to compete with more productive industries for their labor and supplies and are thus barely able to keep going. Any attempt to double or treble the amount of production merely calls into existence business establishments run by less qualified managers or located in less advantageous positions, so that with respect to business establishments it becomes a truism that "the poor ye have with you always." Conversely, any attempt to take away or reduce the amount of protection will necessarily mean bankruptcy to those marginal establishments. They can always bring pressure to bear upon Congress and can always show convincingly that they would be ruined if protection were taken away. Thus the infant-industries argument sooner or later inevitably becomes an argument in behalf of the small or the inefficient producer. In the second place, as laws are made in any democratic country, the lobby (which has sometimes been called the third House of Congress) is a powerful factor. The real infant industry is seldom able to support a powerful lobby. Generally speaking, the larger and more prosperous the industry, the larger and more efficient the lobby which it can support. This makes it extremely improbable that the infant industry will get protection and extremely probable that the gigantic industry will get it.

The standard-of-living argument. By the standard-of-living argument is meant the contention that, since American laborers

get higher wages and maintain a higher and more expensive standard of living than most foreign laborers, it is necessary to compensate the manufacturer for these higher wages by enabling him to get somewhat higher prices for his product. From the free-trader's point of view this looks like putting the cart before the horse. The reason why wages are higher in one country than another is that labor is more productive in the one than in the other. If labor is more productive the laborer creates the product out of which his higher wages are to be paid. We have had such an abundance of natural resources and, on the whole, compared with old and overcrowded countries, such a dearth of labor that the marginal productivity of labor has been high in this country. The unprotected industries pay these wages as well as do the protected. If a given industry is not able to compete against agriculture and mining in hiring labor, that is a sign that the industry in question is not so productive as agriculture and mining. Therefore it would be a mistake to tax the more productive industries in order to allow a bounty or a higher price to the less productive industry. In the past, at any rate, there have been so many opportunities for poor people to go onto the land and work for themselves, and eventually to become landowners, that manufacturers have had some difficulty in getting labor for their factories. In other words, labor has found a better opportunity somewhere else. Two methods have been resorted to by the manufacturers to overcome this difficulty. One has been the wholesale importation of foreign labor; the other, the securing of protective duties in favor of their business. It would seem that anyone with a sense of humor could hardly keep his face straight while importing the cheapest kind of foreign labor to fill his factory and at the same time demanding protection in order that American labor might maintain its high standard of living.

The antidumping argument. As to the antidumping argument, there is a certain justification for it. By the antidumping argument is meant the argument that an old and well-

established industry may, whenever it finds itself with a surplus product which is difficult to sell in its own country, offer it for sale in a foreign country far below the cost of production; or, as the argument is put in the country where protection is advocated, the foreign producer may dump his surplus onto our markets and demoralize the business of production here.

In so far as this dumping policy is temporary and spasmodic, there is a good deal to be said in favor of the policy which will restrict it. If, for example, a group of foreign manufacturers were to dispose of a temporary surplus in this country far below the cost of production, and keep it up spasmodically for a few years, it might cause bankruptcy among our own producers and discourage others from entering the business. As a result we might find ourselves in a short time with no industry of our own. Then the foreign producers would no longer need to dump their surplus onto us, but could charge us a good high price.

On the other hand, if the policy of dumping a surplus product on our markets is a permanent one, there is everything to be said in favor of allowing it to go on and allowing the home industry to die out. It merely enables us to get permanently a product much cheaper than that which we could produce ourselves. The labor and capital which would otherwise be engaged in this industry would now better be engaged in some other. It has been humorously pointed out that the greatest case of dumping in the world is that of the sun, which sends us light and heat at ruinously low prices. Inasmuch as it is a permanent policy of the sun, we can easily adjust ourselves to it and dispense with any industry which would propose to supply us with daylight and summer heat.

Not many years ago certain countries gave a bounty for the export of sugar. This looked like a permanent policy for encouraging the dumping of a certain commodity on other markets. The chief result was that England, a free-trade country, got an abundant supply of very cheap sugar. This not only gave her a cheap food product but enabled her to develop

certain industries, such as the making of jam and marmalade, on a large scale and to sell the products of these industries on the markets of the world, sometimes selling them back to the countries which had given a bounty on the exportation of sugar.

The military-defense argument. So long as war is a possibility the necessity for military defense will remain with us, and so long as we must be prepared for military defense the argument in favor of producing certain essential military supplies at home, even at greater cost than that at which they could be procured from abroad, will be overwhelming. It is obvious that at the very time when we need military supplies most—in time of war—we may not be able to get them at all if we depend upon foreign sources. This would apply not only to military supplies in the technical sense (that is, goods and ammunitions) but also to every article which is indispensable in time of war. It might easily happen that a nation would fail in its military operations by reason of a lack of some single military article like nitrogen or copper and suffer a national disaster and humiliation in consequence. Until we can be reasonably certain that war has been permanently eliminated, the argument for government encouragement of the production of every indispensable military article is overwhelming. The free trader really has nothing effective to say against it.

Aside from these six arguments there are certain large historical arguments that are frequently used by the protectionist. It is pointed out, for example, that America has prospered amazingly under a protectionist policy. It is, however, equally true that England has prospered amazingly under her free-trade policy. She became prosperous before her European neighbors did, and outstripped them all, at least during the first half century of her free-trade policy. Again, the protectionist points to the recent rapid advance in prosperity and industrial power of Germany as an example of the beneficence of the protectionist policy. To this the free trader may retort, first, that Germany's prosperity began with the formation of the German Empire in 1871. The taking away of the tariff walls between

the German states and the establishing of a free-trade area within the whole empire created a much larger free-trade area than had formerly existed. Second, the efficiency of the German system of technical education has contributed more than any other single factor to her prosperity. In the third place, Germany has had the advantage of a lower standard of living. England became prosperous long before Germany did, and as a result of her prosperity wages rose and likewise salaries and all living expenses. The English workingman gets higher wages than the German workingman. All the salaried men in English factories get higher wages and work shorter hours than the salaried men in German factories. The English agents in foreign ports not only get higher salaries but insist on week-end holidays and on having several afternoons off during the week in order to play golf and tennis, whereas the German agent works continuously every day and Sunday. In other words, part of Germany's advantage has been her lower standard of living. The free trader would say, "Let's wait and see how long Germany can maintain her low standard of living after she has become as prosperous as England." It may be that after she has enjoyed prosperity as long as England, there will come the same softening in her vigor, the same desire for luxurious expenditure and leisure, and she will thus lose her chief advantage in international competition. If it is any comfort for the protectionist to point out that free trade tends to overprosperity, and prosperity to softening, he is welcome to it.

CHAPTER XXXII

PROTECTIONISM

The weight of the argument in the last chapter was overwhelmingly in favor of free trade except in the matter of war supplies. Sometimes, however, it seems as though the free traders were willing and able to answer all the arguments in favor of protection except the real ones. They confine themselves, in other words, to the popular arguments which have not now and never did have any support from serious students of the problem. The following arguments may not appeal to the popular mind nor furnish much support to any particular tariff bill; they do, however, outline certain possibilities of a protective tariff which may be realized if the government really wants to go about it seriously.

Some possibilities of a protective tariff.[1] (1) A tariff duty is not necessarily paid by the home consumer; (2) a protective tariff may be so framed as to raise wages; (3) it may be so framed as to attract labor and capital from the less productive into the more productive industries,—judged from the standpoint of the community rather than from that of the individual business man.

When the consumer pays the tariff. Whether the home consumer pays the tariff duty or not depends upon whether or not it raises the price, in the home market, of the article upon which it is collected. Whether it raises the price or not depends upon whether it reduces the supply of the article in the home market or not, it being assumed that the duty will not affect the demand. The effect of a duty is ordinarily to reduce the amount of the article imported. The question is,

[1] The rest of this chapter is from a paper read by the author before the American Economic Association and published in the *Proceedings* of the association in 1902.

Will the home product then increase, as a result of the duty, sufficiently to counterbalance the diminution in the amount imported? If the conditions are such that a tariff duty will occasion an increase in the domestic product equal to the diminution in the amount imported, the duty will occasion no change in the total supply on the home market and consequently no general change in the price of the article; but if the domestic product does not increase sufficiently to offset entirely the diminution in the amount imported, there will be a decrease in the total supply on the home market and consequently a rise in price.

When the increase in home production offsets the decrease in importation. The question then becomes, Under what conditions will a tariff duty occasion sufficient increase in the domestic product to counterbalance the diminution in the amount imported? If the duty is laid upon an article not producible at home under existing conditions and at existing prices, there can manifestly be no such increase in the domestic product, and the price will rise in consequence of the duty. How large a share of the duty will be added to the price of the article will depend upon the comparative elasticity of the demand and the supply.

When the foreign producer pays the tariff. If the demand is highly elastic, while the supply is inelastic, only a small proportion of the duty will be added to the price; that is to say, an elastic demand means that if there is a slight rise in the price of the article to the consumer, it will cause a great falling off in the amount purchased. In other words, the consumer may be said to have considerable power of resistance. On the other hand, if a considerable fall in the price which the producer can get will cause only a slight falling off in the amount produced, as will happen when there are considerable differences in the cost of producing different parts of the supply, the supply is inelastic. When the demand is elastic and the supply relatively inelastic, the burden of a tariff duty will be borne largely by the foreign producer and only to a slight degree by the home consumer. Reversing the argument we shall reach the conclusion

that when the demand for the article is inelastic and the supply relatively elastic, the burden of the duty will fall largely upon the home consumer.

When a tariff is prohibitive. When both the supply and the demand are very elastic a tariff duty will tend to be prohibitive; that is to say, if a slight rise in the price to the consumer would cause a large falling off in the amount consumed, and a slight fall in the price to the producer would cause a great falling off in the amount sent to the tariff country, manifestly neither the producer nor the consumer can be made to pay the tariff, and the article will practically cease to be imported.

If the article is produced at home, but under the law of expanding cost (commonly confused with the law of diminishing returns), the presumption is that as much is already being produced at any given time as can be produced at existing prices. The one condition for an increase in the home product is that there shall be a rise in price. It is evident that the domestic product could not increase sufficiently to keep the prices down, for the reason that in this case there could be no increase in the home production. A duty on such an article would raise its price and be borne, in part at least, by the home consumer.

In case the duty is laid upon an article which is produced at home under the law of diminishing cost (provided its production has not been monopolized), a different result follows. In a case of this kind the shutting out of a part of the foreign supply increases the opportunities for the marketing of the home product; and since the latter is increased without any increase in cost, there is nothing to prevent it from increasing enough to offset entirely any diminution in the amount imported. In this case there is no reason to expect that the price will be higher under the tariff than it would be without the tariff.

The shutting out of a part of the foreign supply is analogous to a normal growth in the consumption of the article, at least in so far as it affects the home producers. They find an increase in the consumption of their products, and it makes no difference to them whether this is due to a decrease in importa-

tion or to a growth in the normal consumption of the article. Few economists would contend that a normal growth in the consumption of an article which could be indefinitely increased at diminishing cost would cause the article to sell at a higher price. It is the position of this chapter that there is no better ground for contending that a tariff duty on an article already producible at home under the law of diminishing cost would raise the price of the article, or that when there is no natural check, such as increasing cost, to the home production there is no reason why the home production may not increase enough to make up entirely for any falling off in the amount imported.[1]

The case of monopoly. If, however, the article is one whose home production is in the hands of a monopoly, the shutting out of a part of the foreign product would increase the monopoly's power over the home market and give it an opportunity to exact a somewhat higher price than would otherwise be possible. There is a very widespread belief that a monopoly fixes the price of its product according to a different principle from that which is followed by a single producer in a competitive industry, but such is not the case. In either case the price is fixed at the point which will yield the largest net income to the producer. The difference is that the individual producer in a competitive industry has to face a different set of conditions from that which confronts the monopolists. The competitive producer knows that if he charges too high a price for his products, his sales will fall off rapidly, not only through the unwillingness of the public to buy the product but also through his being undersold by his competitors. If he held a monopoly he would know that a similar rise in the price of the product would cause his sales to fall off less rapidly because only one (namely, the former) of those two forces would operate.

While both the monopolist and the competitive producer try to sell at the point of highest net return, that point is likely to be somewhat different in the two cases because of the differences

[1] In fact, there are reasons for believing that the price would fall. Cf. Alfred Marshall, Principles of Economics (fourth edition), p. 525.

in the conditions which confront the two producers. The competitive producer has two checks on high prices, where the monopolist has one; hence a monopoly price is likely to be higher than a competitive price. A tariff duty which shuts out a part of the foreign product removes one of the checks upon the power of a monopoly to charge high prices and changes the location of the point of highest net return.

Can a tariff increase wages? Whether a protective tariff can increase the price of labor or not depends first upon whether or not it is possible, by means of a tariff, to increase the demand for labor relatively to the demand for other factors of production. If this can be done labor will get a larger share of the total product of the industry of the community. This alone would not prove that the individual laborer would in the end be better off. In the first place, the supply of labor might increase correspondingly, either through immigration or by natural means, and in this event there would be no increase in individual wages, even though a larger share of the total product did go to the payment of labor. In the second place, the tariff might diminish the total product of industry so that even though the laborers did get a larger share of the total the absolute amount going to them as wages might be no greater than, indeed not so great as, before.

As to the first objection, it needs only to be said that if the tariff increases the demand for labor, that will tend to raise wages. Whether or not this tendency will be counteracted by immigration or by natural increase depends upon other conditions. If the tariff stimulates immigration or increases the birth rate over what it would be without a tariff, the presumption is that it does so because it increases the demand for labor and raises wages, which is all that this chapter contends for. Wages may or may not be subsequently reduced to the old level by other forces counteracting the tendency of the tariff. As to the second condition, it is hoped that the third part of this chapter will show that a protective tariff does not necessarily diminish the total product of industry.

Owing to the limited space available it is necessary to assume two premises as the basis of the argument for the proposition that a protective tariff may be so framed as to raise wages within the country. (1) The three factors of production—land, labor, and capital—are combined in different proportions in the production of different commodities. (2) A selected industry may be stimulated and made to grow by means of a protective tariff. Both these propositions could be proved if space allowed, but neither is likely to be disputed by any considerable number of people. Assuming them to be true, it is necessary only to stimulate, by means of a protective tariff, the production of those articles into which labor enters as the principal factor, leaving unprotected those industries into which labor enters as a relatively less important factor. This is a process of artificial selection in which the variation which makes selection possible is found in the different proportions in which the three factors are combined in the different industries. The favorable variations, from the standpoint of the laboring class, are those industries in which labor is relatively the more important factor, and the unfavorable variations are those in which labor is relatively the less important factor. In order to favor the laboring class it is necessary only to select the favorable variations; that is, to build up by artificial means those industries in which labor is the principal factor. Even though this should result in a corresponding injury to other industries, there would still remain a net gain to labor.

Let us suppose, by way of illustration, that in industry A, at a given period, the best results, from the standpoint of the entrepreneur, are ordinarily obtained by combining 1000 acres of land, 10 laborers, and $100,000 worth of capital. These yield a product worth $20,000. In industry B, to get a product of the same value, the best results would be obtained from combining the factors in the following proportions: 10 acres of land, 20 laborers, and $100,000 worth of capital. Wages and interest are assumed to be the same in the two industries. For the sake of simplicity capital is assumed to bear the same ratio to product

in the two industries, land and labor being the varying factors. By building up industry B, even at the expense of industry A, there will result a net increase in employment of labor, though a corresponding decrease in the employment of land. This increase in the employment of labor means an increase in the demand for labor, while the decrease in the employment of land means a decrease in the demand for land. The result of this situation would be that a larger share of the total product would go in the payment of wages and a smaller share in the payment of rent.

In the following tables, I represents the conditions as described above; II, the situation after industry B has been expanded 50 per cent and industry A has been correspondingly contracted.

I

	Acres	Laborers	Capital	Product
Industry A	1000	10	$100,000	$20,000
Industry B	10	20	100,000	20,000
Totals	1010	30	$200,000	$40,000

II

	Acres	Laborers	Capital	Product
Industry A	500	5	$50,000	$10,000
Industry B	15	30	150,000	30,000
Totals	515	35	$200,000	$40,000

This shows a decrease of 495 in the number of acres used and an increase of 5 in the number of men employed.

We need here to guard against the possibility that industry B, while using fewer acres of land, might require a kind of land that is so very scarce that the rent charge would be higher than in A. But this is not a necessary condition. It is quite conceivable that the two industries would use the same grade of land. It is even conceivable that industry B, in addition to using fewer acres, would also use a more abundant kind

of land, where rents were less per acre. The whole difficulty could be avoided by starting with the proposition that in different industries rent charges, wages, and interest enter in varying proportions. Then, by selecting for governmental favor those industries in which wages, rather than rent or interest, form the chief item of expense, the total industry of the country would be affected favorably from the standpoint of the wage receivers.

It goes without saying that an entirely different result would be obtained by selecting for governmental favor those industries in which rent or interest form the chief item of expense, —a result advantageous to the landlord or the capitalist, but disadvantageous to the laborer. It must be confessed also that as protectionism has been applied in the past, especially in England before the repeal of the corn laws, this result was quite as frequently obtained as the other. There is some danger also that it will be so in the future, owing to the better lobbying facilities of the landowning and capitalistic classes. But that is another matter.

Does a tariff favor the less productive industries? The proposition that protection attracts labor and capital from the more productive to the less productive industries has long been one of the basic principles of the free-trade school,—the rock on which all protectionist theories were supposed to split. And it must be conceded that unless this position can be successfully assailed, the free trader will always have the advantage in the argument.

The difficulty with the proposition lies in the double meaning which is given to the word "productive." In order to make a true proposition of it this word must be given a certain meaning; but in order to make it a conclusive argument the word must have quite a different meaning. From the standpoint of the individual business man a productive industry is a profitable[1]

[1] For want of a better term the words "profit" and "profitable" are used in the more popular sense which agrees with the use of the terms by the older writers on economics. Profit is made to include the surplus income of an industry over and above the cost of conducting it. In this broad sense it includes

industry; that is, an industry which offers the opportunity of making a surplus gain over the cost of running the business. From the standpoint of the community a productive industry is one which increases the sum total of utilities. It is the profitableness of the industry, rather than its productiveness in the latter sense, which causes labor and capital to go into it. It is only by defining "productive" as "profitable" that one can support the proposition that labor and capital will seek those industries which are naturally most productive. In that sense, and in that sense alone, it is quite true that protection attracts labor and capital from the more productive to the less productive industries.

Meaning of the word "productive." But in order to have any weight as an argument this proposition must mean that protection attracts labor and capital from those industries which create more utilities into those which create fewer utilities. That is to say, the word "productive" must mean something more than "profitable." The difficulty could be met only by showing that the industry which is profitable from the standpoint of the individual business man is always a productive industry from the standpoint of the community. If this cannot be shown, it means that labor and capital, if left to themselves, will, in seeking the largest profits, sometimes go into the less productive industries. There would then be a possibility that protection or some other form of government interference might be able to attract labor and capital from a less productive industry, into which they would naturally go in pursuit of profits, into a more productive industry, from which they would naturally have been excluded by the smallness of the profits. This possibility would become a reality if the relative profitableness of the two industries could be reversed by some kind of government discrimination.

The question then becomes, Are the more profitable industries always the more productive? Manifestly not. To say

rent and every other form of surplus. A profitable industry would therefore be one which would yield a surplus income of some kind. This surplus is what attracts the director of industry, and it is the surplus-producing power of an industry which determines whether or not labor and capital shall go into it.

nothing of certain lines of business which are acquisitive in their nature and not productive at all, there are certain highly productive industries which have very little power of attracting individual enterprise.

The case of lighthouses. To begin with an extreme case, there is the work of maintaining lighthouses. This illustration is chosen not because it is supposed to be typical of those industries which are fitted to receive protection but solely because it serves to make clear that there may be a productive industry which offers no inducements for private enterprise. On the one hand, this work has all the earmarks of a productive industry. It produces a real utility; this utility is of a materialistic sort, not moral or social as is that produced by educational and other similar institutions, and it is produced by purely mechanical processes. There is nothing in the nature of the utility produced or its processes of production to distinguish this from any money-making business. On the other hand, this industry offers no incentive to private enterprise (that is, no opportunity for private profits) for the one sufficient reason that the producer cannot control his product. The lighthouse will shine upon those who do not pay for it as well as upon those who do. He is therefore not in a position to exact a payment for his product corresponding to its utility.

It will doubtless be objected that this is a case calling for government ownership and operation rather than protection, and the point would be well taken. This is a business so completely devoid of opportunity for profitable enterprise that no kind of protective tariff would be able to make it profitable. Nothing but a subsidy could induce private capital to go into it, and the subsidy would have to cover the whole cost. In that case the government might just as well, it may be maintained, own and carry on the business. But the difference between this industry and one which would lend itself to protective measures is one of degree only.

Industries differ widely in this particular: whereas one, such as the maintenance of lighthouses, produces a utility that can-

not be controlled at all in the interest of the owner, another produces a utility of such a nature that the owner can exact full payment from those who use it, while still another produces no utility at all, but is purely acquisitive in its nature. An example of the last (not to come too near home) would be the medieval baron who took possession of a natural ford or a mountain pass, set up his castle, and went into the business of collecting toll of all who passed that way.[1] These three industries do not belong to sharply differentiated classes, but shade off gradually into one another. That is to say, there is a gradual shading off, from the business which creates utilities far in excess of any amount which the owner of the business can collect, to the business which can collect a revenue far in excess of any utility actually created by it. Here again we have a form of variation which makes artificial selection possible, the favorable variations being those industries which come under the former description.

No complete harmony of human interests. In considering this aspect of economic life too much has been usually assumed as to the harmony of human interests. Nothing is more fundamental in economic science than the proposition that there is an antagonism of human interests. If there were a complete harmony of interests labor and capital might be expected to seek those industries which are most productive from the social standpoint. But aside from the observable fact that labor and capital do nothing of the kind, it is a matter of common observation and experience, confirmed by reflective analysis, that there

[1] This is a business to which the principle of "charging what the traffic will bear" applies beautifully. What the traffic will bear is in this case determined by the superiority of the ford or pass in question over other available ways that are open. Let us assume that instead of merely collecting toll the baron spends some trifling sum in the improvement of the passage, still charging what the traffic will bear. His business then becomes slightly productive, but its productiveness is small as compared with its profitableness. Then let us assume that he gradually increases his expenditures for the improvement of the passage until the utility created approximates more and more nearly to the charges collected: at each stage of the process his business will represent some type actually carried on among us today.

is no such harmony of human interests. One man's interest is served by having the labor and capital of the community directed in one line, another's by having them directed in quite a different line. More than that, there is great inequality among individuals in the power of giving direction to the industry of the community. The one who owns land or capital in addition to his own labor is in a better position, other things being equal, to determine the direction of business activity than is the one who owns only his labor power. We therefore have not only the certainty that each individual will try to direct business activity in the line most conducive to his own interests, and that in many cases his interests will not harmonize with those of the community, but also the certainty that the power to give this direction differs greatly among different individuals. If we did not know it as a matter of direct observation and experience, we might predict from these premises that the business activity of the community would not, in all cases, be directed in the most productive lines and that therefore it would be possible, by some form of discrimination, to attract labor and capital from the less productive to the more productive industries.

Turning land into sheep runs. The following illustration may add something to the concreteness of this conclusion. Let us suppose that a certain tract of land has been devoted to cultivation of a fairly intensive kind and has been producing enough to pay the wages of twenty laborers, with something left over for rent. Through some change of circumstances the price of wool rises, and it is found more profitable to use the land for wool-growing. By turning the land into a sheep run, nineteen of the laborers may be dispensed with, and the saving in wages would more than measure the difference between the value of the wool crop and that of the present crop, so that a larger surplus would be left over as rent. There is little doubt that the land would then be devoted to the growing of wool. That would be to the interest of the landlord and against the interests of the nineteen laborers, but the landlord is in a better position

than they to determine the form of cultivation. There is also little doubt that this would be contrary to the interest of the community. Less wealth would be produced either for consumption or for international trade. Fewer people could be supported, or the same number would not be as well supported as formerly.

If the nineteen men thrown out of employment cannot find places elsewhere they will, since they want to live, probably offer their labor at lower wages,—enough lower to enable the landlord to get as much rent from the more intensive form of cultivation as he might get by the less intensive form. Here we have the somewhat anomalous situation of an increase in the price of one of the products of industry causing a fall in the price of labor. The key to this anomaly is found in the fact that what is cost to one man is frequently gain to another. Now in this supposed case (which is not altogether a supposed case) there is little doubt that some form of discrimination in favor of the present crop and against wool would increase not only the relative share of the produce going to labor but the absolute amount of the produce of the land that would otherwise be devoted to wool-growing.

And this is a rule which works both ways. In a community where land is extensively cultivated, it is presumably because extensive cultivation produces the best results from the standpoint of the landowner. Any one of the following conditions may induce him to change to intensive cultivation: (1) a fall in the price of labor; (2) a fall in the price of the products of extensive cultivation; (3) a rise in the price of the products of intensive cultivation. There lies the opportunity for the protectionist. By some discrimination which would tend to increase the profitableness of the intensive product, an absolutely larger and more valuable product might be created. This would support a larger number of people, or support them better. They would have a larger number of products either for consumption or for international trade. Labor and capital would have been attracted from the less productive to the more productive indus-

try. Since a protective tariff is one means by which the relative profitableness of different industries may be changed, it follows that a protective tariff may be a means of increasing the total product of the industry of the community.

It may be argued,[1] however, that "either these nineteen men have a preferable alternative, under the free-trade régime, to wheat-raising, or they have not. If they have not they will accept low enough wages, rather than be unemployed and have nothing, so that the landowner can realize as much rent for his land as if he used it for a sheep run. Unless their efficiency is thus impaired they will then produce as much wheat as if they were protected. The effect of freedom from restriction may mean, in this special type of case, lower wages and higher rent, but not decreased national wealth. If, however, the nineteen men have a preferable alternative they will not raise wheat but will occupy themselves otherwise at higher wages than wheat-raising under free trade would yield them, while the landowner will at the same time realize the higher rent assumed to result from using his land as a sheep run. Free trade would then *raise rent more than it would lower wages.*"

To this it may be replied that "in case the nineteen laborers decided to accept lower wages and continue growing wheat, there need not be any diminution in the total product. The result would simply be lower wages, higher rent, and the same total product as before, as has been shown already. In case, however, the nineteen laborers decide to enter some other calling it must, of course, be a somewhat more remunerative one than wheat-growing under the new conditions. It could not, however, be so remunerative as wheat-growing had been under the earlier conditions, before the assumed rise in the price of wool; otherwise they would not have been growing wheat in preference to following this new occupation. In short, their wages are somewhat reduced by the enforced change as compared with what they were formerly getting, but not so much

[1] See note by H. G. Brown and the author's rejoinder in the *Quarterly Journal of Economics* for May, 1919, pp. 568–572.

reduced as they would be if they had no alternative employment but were compelled to continue growing wheat at such wages as would leave the landowner as high rent as he might get by turning his land into sheep pasture. When this alternative occupation is open, the changes assumed would raise rent and reduce wages somewhat, but not so much as in the other case.

"Will these changes raise rent *more* than they will lower wages? Yes, if we are thinking of world economy; not necessarily if we are thinking of national economy. In order to find a satisfactory alternative employment the nineteen laborers may emigrate. In case they do, the national product will obviously be reduced and will support a smaller population, though the landowner's rent would be slightly increased. From the standpoint of world economy the increase of the total productivity of industry is probably not among the theoretical possibilities of protectionism; from the standpoint of national economy, it is. The protectionist is, rightly or wrongly, commonly a nationalist, and from his point of view he finds here at least a theoretical possibility."

Free buying and selling not always socially advantageous. The argument of the protectionist in its most general form is that free and unrestricted buying and selling does not necessarily or in all cases result in the highest utility to the nation—in other words, that the market price is not an invariable indicator of social utility. If this were true, so that following the best market price would invariably lead individuals to promote the highest social utility, there would never be any valid ground for protectionism or any other interference with business, internal or external, domestic or foreign. If, however, following the best market price, either in buying or selling, may sometimes lead individuals to do things which are not of the highest social utility, there is at least a theoretical possibility of advantageous interference with the process of free buying and selling. One could not optimistically close his eyes and say "everything is working for the best" without any interference or regulation whatsoever. There is at least a theoretical possibility for im-

provement through restrictive regulation. The practical probability, however, is limited by the wisdom or disinterestedness of lawmakers and administrative officials. If they are no wiser or more disinterested than the average buyer and seller, that probability is very small.

Regulation not always wise. Whether this theoretical possibility for improvement through restriction or regulation can be realized depends somewhat on the character of the government and its officials. The free trader has at least the opportunity to say that government is just as inefficient as business; that following the election is just as likely to lead one astray as following the market; that the political policy that will get the most votes is just as likely to be wrong as the commercial policy that will get the most money. Even granting, therefore, the theoretical possibilities of wise protectionism, he might deny the probability of ever realizing these possibilities and affirm on the contrary that the general experience is that when governments attempt to interfere with freedom of trade by any sort of protective policy, they usually make matters worse instead of better; that they are just as likely to protect the industry that ought not to have protection as the one that ought to have it; and that therefore the free-trade policy works better in the long run than the protective policy, in spite of all the theoretical possibilities of protectionism. The writer adheres to this opinion, not only with respect to the question of free trade and protectionism but with respect to most other questions of government interference.

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PART V. DISTRIBUTION

CHAPTER XXXIII

THE LAW OF VARIABLE PROPORTIONS

The problem of the distribution of wealth is the problem of dividing the products of the industries of the nation among the various classes. The claim of each class to a share of the wealth is usually based upon the claim that each has contributed something to its production. The contribution may be labor, either mental or physical; it may be capital, or the results of foresight or investing; or it may be land which the owner has appropriated or otherwise come into possession of, and which he puts to use or permits someone else to use.

The market value of services. The market value of what each has to offer determines his share in the product. If the market value of labor is high, the laborer gets a large share; if it is low, he gets a small share. The same is true of that which each has to offer. Our first problem must be, therefore, to study the market value of each factor, or agent, of production in order to find out why the seller of each factor gets a large or a small share.

The income of each class, however, is a flow rather than a fund or a lump sum. The laborer sells not himself but the flow of productive energy which he can exert during a given period of time. The capitalist, when he gets interest, sells not his capital but the flow of utilities which come from his capital during a given period of time. If the laborer were a slave he might be sold bodily, and in that case he would bring a price. The capitalist and the landlord may sell their capital and their land outright for a price. This involves a question of exchange and market price. When they sell the flow of utilities which their properties yield we have interest and rent, which are questions of distribution. The following outline will indicate the

relation of these various problems to the general problem of valuation.[1] For convenience the flow of utilities yielded by the various factors of production are called services.

- VALUATION
  - Of goods
    - Consumers' goods
    - Producers' goods
      - Land
      - Capital
      - Laborers (under slavery)
  - Of services
    - Of land (yielding rent)
    - Of capital (yielding interest)
    - Of laborers (earning wages)

Why productive agents are desired. The reason for paying for an agent of production is that it helps to produce something which is desirable. Its value is derived from that of its product, or, as some would say, a part of the value of the product is imputed to the productive agent. At any rate, the producer of a desirable thing may itself be desired, or a thing may be desired because of what it will produce as well as for its own sake. The greater its product, or the greater its contribution to the joint product of a group of factors, the greater its value. It is therefore of the utmost importance that we find out, if such a thing is possible, how to determine the contribution of each factor. This is one of the most elusive problems in the whole field of economics. The student is requested to study this problem as carefully and intensely as he would an intricate problem in physics or chemistry.

A combination of the factors of production not a chemical combination. In Chapter XVII we saw the necessity of a proper balance not only among the factors of production but also among all the factors of national life. But some variation among the factors of production must always be allowed. What constitutes the perfect balance depends upon a number of considerations which have not yet been discussed. Factors of production, when used in combination, are not like the elements in a chemical reaction or the colors in a picture. These

[1] Compare note by the author on "The Place of the Theory of Value in Economics," in the *Quarterly Journal of Economics*, November, 1902.

probably admit of no variation. The factors of production may always be combined in different proportions without destroying the result. One can grow a hundred bushels of wheat in a year by using little land and much labor or by using much land and little labor. Which is the more economical combination will depend upon the relative cost of land and labor. Where land is cheap and labor dear, it pays to use much land and little labor; where land is dear and labor cheap, it pays to use little land and much labor.

In an actual chemical combination the various elements have to be combined, apparently, in fixed proportions, without any variation whatever. This is known as the law of definite proportions. But in order to induce a given chemical combination, different substances have sometimes to be mixed in considerable masses. This gives rise to another law, which is probably as well understood as the law of definite proportions. It is of special importance in economics.

The law of variable proportions. Take, for instance, the juvenile experiment of mixing vinegar and baking soda for the purpose of producing a fizz. The actual combination of molecules which produces the gas that makes the bubbles doubtless follows the law of definite proportions. But not all the materials in the mixture will be thus instantly combined. At the end of a definite period of time, say a minute, some of the acid and some of the soda will remain uncombined, probably because a certain number of molecules of each never happened to come in chemical contact with the requisite molecules of the other. The greater the quantity of vinegar in proportion to the soda, the greater the probability that each molecule of the soda will come in chemical contact with a molecule of acid. Therefore the greater the proportion of vinegar to soda, the greater the proportion of the molecules of soda that will be used in the formation of gas and, conversely, for the same reason, the smaller the proportion of the molecules of acid that will be used. Increase the soda and decrease the vinegar, and the opposite would follow, for the same reason.

Many factors at work in combination. There are, of course, other factors in the problem, such as the size and shape of the receptacle in which the mixture is placed, the temperature of the mixture, the amount of shaking or stirring to which it is subjected, as well as the time allowed for the combination to take place. Leaving all the other factors unchanged except the one selected for experimentation, we get a result similar to that which we obtain in some of the larger economic combinations, such as the application of labor to land. In fact, we are here in contact with a universal law which applies to mixtures of chemicals, as distinct from chemical combinations, to the mixture of fertilizers in the soil, and to every other combination, including that of various forms of human talent in the promotion of national greatness.

The manufacture of ether. In the manufacture of ethers, alcohol is combined with acids much as soda is combined with vinegar in the experiment referred to above. After the mixing has taken place, only a limited proportion of the original ingredients is actually combined. Since alcohol is expensive and the acids are cheap, it is found economical to use large quantities of acids in order to force as much of the alcohol as possible to combine. The acid is literally massed in its attack upon the alcohol, in order that no molecule of the latter may escape. In fact, this phenomenon is explained by the so-called mass law. If alcohol were cheap and acid expensive it would be desirable to force every molecule of the acid to combine. In order that as few as possible might escape, it would be necessary to mass the alcohol in its attack upon the acid. An economist might not improperly call this an intensive use of acid and an extensive use of alcohol. Conversely, the rule actually followed of massing the acid upon the alcohol might be called an intensive use of alcohol and an extensive use of acid. It is certainly analogous to massing large quantities of labor and capital upon small areas of land in order to get the maximum product out of the land, even though a relatively small product per unit of labor and capital is secured.

The results of massing one ingredient upon another may be illustrated by Diagram A, which is familiar to all students of economics. With a given quantity of alcohol let us mix varying quantities of acid, which we shall represent on the line *OX*. The quantity of the product, ether, we shall represent on the line *OY*. When a quantity of acid represented by the line *OC* is put into the mixture, let us assume that we get a quantity of ether represented by the rectangle *OABC*. Twice that quantity of acid with the same quantity of alcohol will increase the product, ether, but will not double it; that is, the product increases but not in proportion to the acid. Let us suppose that a quantity of acid represented by the line *OF* produces, with the other ingredients, a quantity of ether represented by the rectangle *ODEF*. A third increment and a fourth would still result in some additions to the product, as long, perhaps, as any of the original quantity of alcohol was able to escape the mass action of the acid. Eventually the point would be reached where further increases of the acid would add nothing to the product.

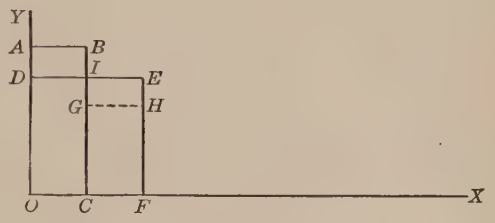


Diagram A

It will be observed, however, that the addition of the increment *CF* to the acid did not add the rectangle *CIEF* to the product. The addition to the product is the difference between the rectangle *OABC* and the rectangle *ODEF*. That difference is represented by the rectangle *CGHF*.

The marginal product. This is technically known as the marginal product of the acid. This technical term does not mean, however, that even the product *CGHF* was produced by the acid alone; it merely means that whatever value there is in the added product *CGHF* would be the outside limit of the value of the added ingredient *CF*.

Air and gasoline in a carburetor. A problem something like this presents itself in practical form in the use of air and gasoline in an internal-combustion engine. Both are necessary, but they may be mixed in somewhat variable proportions. One may use a rich or a lean mixture. A rich mixture is one rich in gasoline and lean in air. A lean mixture is one lean in gasoline and rich in air. Combustion itself is a chemical process and presumably follows the law of definite proportions rather than the law of variable proportions. But the mixture of air and gasoline which has to precede combustion is not a chemical combination and follows the law of variable proportions; that is to say, not all of both ingredients actually burns, any more than all of the ingredients in the manufacture of ether are actually combined. A lean mixture masses air on the gasoline and enables more of the latter to burn, though much of the air is unburned; a rich mixture does not mass so much air, does not burn so much of the gasoline, but burns a larger proportion of the air. If air were expensive and gasoline cheap a rich mixture would be more economical. Since air costs nothing and gasoline is expensive a lean mixture is the more economical. The leaner the mixture that can be made to explode, the greater the economy of gasoline. It wastes air, but that is not bad economy. In short, we try to adjust our carburetors so as to approximate as nearly as possible to the conditions represented in Diagram B.

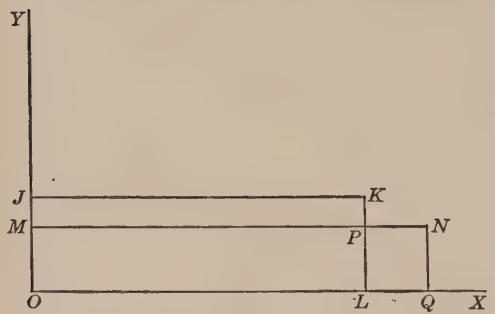


Diagram B

Let us assume that a quantity of acid represented by the line *OL* results, under certain conditions of manufacture, in a quantity of ether represented by the rectangle *OJKL*, while a

quantity represented by the line *OQ* results, under similar circumstances, in a quantity represented by the rectangle *OMNQ*. But these two rectangles are equal; that is to say, with a quantity of acid equal to *OL* one gets precisely the same as with *OQ*. In short, the additional acid, *LQ*, is thrown away. It is of no use whatever in that particular mixture, and yet, the acid being all of uniform quality, it is as good as any of the rest. The average product, however, for that quantity of the variable ingredient would be represented by the rectangle *LPNQ*. It would be foolish to pay that much for it, however, or, if it cost as much as that quantity of ether would sell for, it would be foolish to use so much. If, however, it cost absolutely nothing it might pay to use that much or nearly as much in order to be sure of getting the full use of the alcohol, which is expensive.

If we were to reduce the broken lines which form the tops of the rectangles in the two diagrams A and B to smooth curves, we should get something like the following:

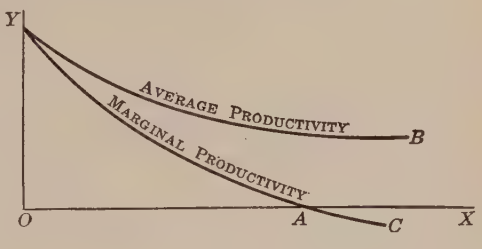


Diagram C

As we increase the quantity of one ingredient along the line *OX*, leaving other factors unchanged, the average productivity (that is, the total product divided by the number of units of the variable ingredient) gradually falls; but as long as there is any product whatsoever there must be an average productivity per unit of that ingredient, this average productivity being represented by the descending curve *YB*. But the marginal productivity falls much more rapidly and may even become a minus quantity. When so much of this variable ingredient is used as to yield the maximum total product, and further additions add nothing to the total, then these further additions are said to have a marginal productivity which is nil. In Diagram C the marginal

product of varying quantities is represented by the line *YA*. In some mixtures further additions may actually interfere with the work and reduce the total product. The curve *YAC* represents the marginal product under these conditions. In other mixtures the excess of the variable ingredient does not become positively detrimental or destructive, but merely neutral. In such cases its marginal productivity becomes nil but never a minus quantity. The curve *YAC* in Diagram C, in order to represent this class of cases, would have to be redrawn. It should never fall below the line *OX*.

Reversing the experiment gives corresponding results. If now we change the experiment and introduce varying quantities of the other ingredient in the mixture with a fixed quantity of the ingredient which we have been considering as the variable factor, we shall get results which harmonize perfectly with those which we have secured hitherto. Returning to the case of alcohol and acid in the making of ether, let us start with a quantity of acid represented by the line *OL* in Diagram B. According to our assumption, as explained earlier, that quantity of acid with the original quantity of alcohol produced no more ether than did a slightly smaller quantity of acid represented by the line *OL*. If now we mix a quantity of acid equal to *OL* with enough additional alcohol to bring the mixture to the same proportions as in the original mixture, in which *OL* acid was used, the product, ether, will increase in exact proportion to the increase in the alcohol, provided, of course, the reaction is not hindered by the smallness of the receptacle or by some other extraneous circumstance.

To use, for example, a fixed quantity of air for each explosion, but a larger quantity of gasoline, would require a larger cylinder. Making such necessary allowances, we can say that if the maximum amount of air in a gasoline engine is used with a given quantity of gasoline, so that more air would be of no advantage whatever, then a little more gasoline could be introduced and would add considerably to the power. There being enough air in the mixture to get the maximum combustion

of gasoline, the power would for a time increase in proportion to the gasoline. As more and more gasoline is introduced, however, with a fixed quantity of air, making the mixture gradually richer, a smaller and smaller proportion of gasoline will be burned because of a scarcity of air. If the mixture is made rich enough a point will be reached where further additions of gasoline will add nothing whatever to the power. The marginal productivity of gasoline is then nil. When the mixture gets so rich that it will not explode, it reduces the power, and the marginal productivity of gasoline becomes a negative quantity.

The marginal product of each factor the complement of that of the other. The marginal productivity of each factor in the combination is, it will be observed, the complement of that of the other factor. When the proportions are such that the marginal productivity of one is nil, that of the other is 100 per cent of the average product; that is, the total product increases in exact proportion as this factor is increased. When the proportions are such that the marginal product of one factor is low, that of the other is high, the sum of the two marginal products always equaling the total product.

When there are more than two factors in the compound the problem becomes more complicated, but the principle is the same. In such a case it is better to treat each one separately, regarding all the others as a bunch, or cluster, and thus treating them as a unit. Marshall has suggested the word "dose" to designate a group of factors. Thus, if we were considering nitrogen, phosphorus, potassium, and all other factors in soil fertility, we could treat all the factors except, say, nitrogen as constants. By varying the nitrogen in the compound we get variations in the crop yields.

Rothamsted experiments. Experiments of this kind have actually been carried on at the Rothamsted estate, near London, where the great work inaugurated by Sir John Lawes has been carried on for many years. In one experiment, for example, five plots of land of approximately equal fertility were treated alike in all particulars save one. Different quantities

of nitrogen were applied in the fertilizer. Forty-three pounds were applied to one; 86 pounds to another; 129 pounds to another; and 172 pounds to another. The following table shows the results:

TABLE I[1]

Plot	Fertilizer	Average Yield in Bushels for Eight Years	Gain for 43 lb. of Nitrogen
No. 5	Mixed minerals alone	19	
No. 6	Mixed minerals plus 43 lb. nitrogen	$27\frac{7}{8}$	$8\frac{7}{8}$
No. 7	Mixed minerals plus 86 lb. nitrogen	$35\frac{1}{2}$	$7\frac{5}{8}$
No. 8	Mixed minerals plus 129 lb. nitrogen	$36\frac{7}{8}$	$1\frac{3}{8}$
No. 16	Mixed minerals plus 172 lb. nitrogen	$37\frac{1}{2}$	$\frac{5}{8}$

According to this table the yields show diminishing returns for each successive dose of 43 pounds of nitrogen. The gain on Plot No. 16 over Plot No. 8 was so slight, being only five eighths of a bushel, as to be obviously unprofitable. Therefore this plot was discontinued at the end of eight years, but the other four were continued for forty-eight years, with the following results:

TABLE II[1]

Plot	Yield in Bushels	Gain for 43 lb. Nitrogen
No. 5	15	
No. 6	24	9
No. 7	33	9
No. 8	$36\frac{3}{4}$	$3\frac{3}{4}$

The number of plots is too small to be finally conclusive, but so far as they go they show interesting results. The first two doses of 43 pounds each (on Plot No. 6 and Plot No. 7) show

[1] These tables are presented in the excellent article by Eugene Davenport, in Bailey's "Cyclopedia of American Agriculture" (The Macmillan Company, New York); compare also the author's volume "Principles of Rural Economics" (Ginn and Company, Boston, 1911), pp. 183–184.

constant returns, and the third dose (on Plot No. 8) shows sharply diminishing returns. Allowing $6.50 as a fair price for 43 pounds of nitrogen and $1 as a fair price for a bushel of wheat we get the following results:

TABLE III

Plot	Yield in Bushels	Gain for 43 lb. Nitrogen	Value of Gain	Cost of Gain	Profit or Loss
No. 5	15				
No. 6	24	9	$9	$6.50	$2.50, profit
No. 7	33	9	9	6.50	2.50, profit
No. 8	$36\frac{3}{4}$	$3\frac{3}{4}$	3.75	6.50	2.75, loss

If the price of wheat were $2 a bushel the net gains would have been $11.50 on Plot No. 6, $11.50 on Plot No. 7, and $1 on Plot No. 8. In other words, the last dose of 43 pounds of nitrogen would have paid a profit of $1 instead of a loss of $2.75. But if the price of wheat had been 50 cents a bushel, nitrogen costing the same, there would have been a loss on every dose of nitrogen.

Problems to be worked out. These tables present a number of interesting problems which the student may work out for himself. Taking Tables II and III as a basis, the following problems are suggested:

1. With 43 pounds of nitrogen costing $6.50, at what average price must wheat sell in order that the farmer may come out just even, with neither profit nor loss, on the third dose of 43 pounds of nitrogen (Plot No. 8)?

2. With wheat selling at $1 a bushel, at what price must 43 pounds of nitrogen sell in order that the farmer may come out even on the same plot with the same application of nitrogen?

We may, without doing violence to language, turn about and speak of "applying" doses of land-plus-other-factors to nitrogen. Let us start with 129 pounds of nitrogen, to which one plot, or dose of land-plus-other-factors, is applied, yielding (according to Tables II and III) $36\frac{3}{4}$ bushels. Adding two more

plots to this combination (that is, spreading our 129 pounds of nitrogen over three plots instead of one) we get a much larger crop. Assuming that Plot No. 6 is exactly equal to Plot No. 8 we get 72 bushels; that is, on Plot No. 6 one dose of nitrogen with one dose of land-plus-other-factors yields, according to our tables, 24 bushels. Three doses of 43 pounds of nitrogen added to three doses of land-plus-other-factors should give us three times as much, which makes 72 bushels.

Since three doses of nitrogen with one dose of land-plus-other-factors yields 72, it follows that the adding of two doses of land-plus-other-factors adds $35\frac{1}{4}$ bushels.

A large number of experiments of the same kind needed. We have not plots enough to carry this analysis much further, but it is probably clear enough by this time that by varying the ratios in which different factors are mixed in any productive combination we get varying results. That being the case, any economist who is not willing to consider the relation of the variation in the factors to the variation in the product is not much of an economist. It must also be apparent by this time that the relation between the variation in the quantity of any factor in the combination and the variation in the product must have a great deal to do with determining the value of the factor.

This method gives the key to all correct valuation. Earlier in the chapter the term "marginal productivity" was applied to the variation in the product which followed a minute variation in the quantity of any factor in the combination. In each of the Tables I, II, III, the figures in the third column would be called the marginal product of nitrogen. Objection has occasionally been raised to the use of the word "product" in this sense. It is contended that even these increments of product are not in any sense the exclusive product of the 43 pounds of nitrogen which were added in order to get that increment,—that 43 pounds of nitrogen, alone and unrelated to the other factors, would not produce even the small increments of wheat indicated in the third column. No one, of course, claims that they would or could. It is not worth while to discuss this or

that possible meaning of the word "product" or "productivity." The essential thing to consider is, How much could a farmer afford to pay for a given quantity of nitrogen to be used in a given combination? It is obvious that this must depend on the way it would affect the crop. How much more wheat could he grow by using more nitrogen or how much less would he grow by using less? There is no question more practical than this. It is, moreover, a question which must be raised with respect to each and every factor in that combination of factors called a farm, or in any other business establishment. It is in the answers to such questions that we must find the key to any clear understanding of the problem of the distribution of wealth, which is, as pointed out in the beginning of this chapter, the problem of the valuation of the factors of production.

CHAPTER XXXIV

THE PROBLEM OF DISTRIBUTION

How intensely is a man's labor desired? The price of labor, like the price of commodities, depends upon how much it is desired in comparison with other things. It is important in discussing wages, as in discussing the price of commodities, that we remember that it is not labor in general, but specific units of labor, which are purchased. The question is not how intense is the need or desire for labor in general nor how great would be the loss if all labor were destroyed. The question is how intense is the need for a given number of units of a given kind of labor or how great would be the loss if that given number of units were subtracted from the total supply. In the case of labor, as in the case of commodities, the practical everyday question on the part of the prospective purchaser is, How much do I need this particular article or the labor of this particular man? How much better off shall I be with the advantage of his help than without it?

The need for more labor, rather than the absolute need for labor. It may be true that if there were no labor of a given class, say that of ditch-diggers, the community would suffer terribly. Nevertheless, there may be so many ditch-diggers that the addition of one to the total number would add very little to, and the subtraction of one would subtract very little from, the well-being of the community. When this is the case the labor of any one of the total number will not be very much desired. Would-be employers will be somewhat indifferent to his offers to help and to his threats to stop working or to emigrate. The indispensable man, like the indispensable commodity, commands the high price; the man who can be easily spared, like the superfluous commodity, brings the low price.

This may be called the functional theory of wages. It forms a part of the functional theory of value which was outlined in a previous chapter. The function of a high price in the economy of the nation is to call into existence a larger supply of the thing for which it is offered; the function of a low price is to discourage the production and reduce the supply of the thing for which it is offered. If a larger supply is desired or needed, a high price may be offered as a means of getting it; in fact, in a free country it is almost the only way. In an unfree country it could be commandeered or conscripted. If a larger supply is not desired or needed, a low price is the means of checking, limiting, or reducing the supply. Find out, in any given case, how much better off a community would be (or thinks it would be) if it had more of a given thing than it now has, and you have a fair measure of the reward which it could afford (or thinks it could afford) to pay in order to get more. Stated negatively, find out how much worse off the community would be (or thinks it would be) if it were to lose a unit or a few units of its existing supply of a given thing, and you have a measure of what it could afford (or thinks it could afford) to pay rather than to incur that loss. If it thinks it would make a great difference one way or the other, a high price will be offered; if it thinks it would make very little difference, a low price will be offered. This applies to the price of labor as well as to the price of commodities, and for the same reason.

In the case of labor, as in that of commodities, the community may be sadly mistaken. It may fail to appreciate real merit, and it may greatly overrate certain qualities in either case. There is no going behind the returns in a verdict of this kind any more than in a popular election. Again, there may be members of the community who desire intensely to possess a certain commodity or to hire a certain kind of labor, but who have not the wherewithal to purchase or hire it. They will therefore have little influence on the price or the wages. This impecunious condition may be due to the fact that others have no great desire for the labor or the products of the persons

in question. In that case the community does not value their services very highly, and therefore their desires have little influence on the market for other things or other services.

Productive labor is wanted because of its product. Our next task is to find out what determines how much the labor of any particular man or group of men is wanted. In the simplest possible case—that of a laborer who, without any help from anybody else, produces a complete article—his labor is needed just as much as and no more than the article itself is needed. The price of the article, then, is his reward. If he is not satisfied with his income he must find fault with the price which the consumer pays for the product (for he gets the whole price) and not with the share of the product which goes to him. This, however, is a case so simple as to be very exceptional. Very few finished products are produced by the labor of a single person. One who goes out into the woods and gathers nuts or berries, carries them in vessels which he has himself improvised, and sells them directly to consumers may come under this class. The woodsman who goes into the primeval forest and chops wood will at least have an ax; this ax is likely to have been made by somebody else. He will probably also need a team, which may have been grown or produced by somebody else. While it is not strictly true that in a case of this kind the finished product, firewood, is produced by the labor of one man, still the problem in distribution is fairly simple. If the woodman has paid a fair price for his ax, the question of distribution as between him and the ax-maker is settled and does not need to bother us any more. If he has likewise paid a fair price for his team and wagon, the problem of distribution as between himself and the horse-breeder and wagon-maker is also settled and need not bother us again. Since he has paid for his tools, the total value of the wood which he cuts and hauls to town is his reward, and there is no further problem in distribution. But the farther we proceed with our study, the more complicated the problem will become, for we shall

find that in the great majority of cases the product is the joint product of a large number of people.

Goods generally produced by the joint labor of a number of persons. We are sometimes told that most goods are socially produced. This is a rather impressionistic statement; it may do no harm, but it is liable to misinterpretation. It would be better to say that most goods are produced by the joint efforts of several persons. The total reward which can go to all of them cannot in the long run exceed the total value of the finished product in the complex cases any more than in the simple cases of the berry-picker and the woodchopper. This must be divided among all those who have participated in its production. The price of the loaf of bread must reward all those who have had any part in its production, including the baker, the miller, the various transportation agencies, and the farmer, as well as the manufacturers of the farmer's, the baker's, and the miller's tools, and so on back to the lumbermen and the miners who extracted the raw material out of which the tools were made.

The successive division of labor and the problem of distribution. We find here that we are in contact with what, in a previous chapter, has been called the division of labor. This, as already pointed out, is of two kinds: contemporaneous and successive. We have the successive division as between the farmer and the miller, and as between the miller and the baker, since, one after the other, they work upon the same material. We have an example of the contemporaneous division of labor as between the baker and his assistants, the mill-owner and his employees of various kinds, the farmer and his hired men, the railroad company and its employees, and so on. The problem of distributing the price of the finished product among those who work upon the raw material in regular succession is simply a problem in the price of commodities. Thus the reward of the farming group comes to them in the form of the price of wheat. This price must then be distributed among the contempora-

neous workers on the farm; that is, the farmer himself and his hired men. The difference between the price of wheat and that of flour and its by-products must furnish the total reward for the milling group and must be divided among them, and the difference between the price of flour and that of the bread must furnish the total reward to be divided among the baking group.

All this is fairly simple and leads to no serious social problem. Of course the farmer would like to get a higher price for his wheat and the miller would like to get it at a lower price, and each one may from time to time accuse the other of trying to manipulate the price; but this phase of the problem of distribution is a question of the market price of an impersonal commodity, and society in general has not taken up the quarrel. Similarly, the miller would like to get a higher price for his flour, and the baker would like to get it at a lower price. This conflict of interests, however, is also a question of a commodity price, and it does not now create what is known as a social problem. The commodity market is supposed to take care of it, and social reformers in general have not exercised themselves to any great extent on the subject. Occasionally, of course, someone is accused of cornering wheat or manipulating the price of flour. Similarly, the baker would like not only to get his flour cheaper but also to sell his bread at a higher price. This, again, is taken care of by the commodity market.

When bakers are accused of manipulating prices, as is not infrequently charged by dissatisfied consumers, no great social problem is supposed to be created. There have been historic occasions, of course, when mobs of irate consumers have hanged bakers to their own lamp-posts because the price of bread was higher than the consumers liked to pay. They have not always stopped to consider how much the baker had to pay for his flour, or the miller for his wheat, or how hard a time the farmer had had in growing his wheat, owing to bad weather and pests of various kinds. All that the irate consumers realized was that the price of bread was higher than they were accustomed to paying, and the unfortunate baker

was the only one within their reach upon whom they could wreak their vengeance.

The division of the product among contemporaneous workers the difficult problem. The great social problem of today, so far as it relates to the distribution of wealth, is the problem of distributing the price of the product among the contemporaneous workers. Of the total price of wheat, how much should go to the landowner (if he is a different man from the farmer), how much to the farmer, how much to the laborer, how much to the capitalist (if he is a different man from the farmer)? Or, again, of the total spread between the price of wheat and the price of flour, which furnishes the total reward to the milling group, how much should go to the capitalist, how much to the owner of the mill site, how much to the manager, and how much to the various types of laborers? And so on through the transportation groups and the baking groups, the difficult problem is always that of the distribution of the total earnings of the group among the contemporaneous workers within it.

What is meant by relative productivity? Not much headway can ever be made in the study of this problem unless we hold carefully in mind the law of variable proportions as explained in the last chapter. When it is suggested, for example, that each factor of production should be paid for in proportion to its contribution to the product, any student who does not understand the law of variable proportions is likely to say that there is no way of finding out what each factor contributes. He will say, for example, that it is like trying to find out how much of the welding is done by the anvil and how much by the hammer, or how much of the cutting by the upper and how much by the lower blade of the scissors. To use this comparison is to show that one does not understand the problem. If one blade of the scissors were a little longer than the other, it would not require any so-called metaphysical or theoretical reasoning to see that the scissors might be improved by lengthening the shorter blade. If two workmen were to offer their services, one to lengthen the longer blade and one

to lengthen the shorter blade, it would not take much of a theoretician to decide which workman it would be better to hire. The workman who would lengthen the shorter blade would add somewhat more to the cutting-power of the scissors than the workman who would lengthen the longer blade. If blacksmiths all had anvils enough but were short of hammers, or had hammers enough but were short of anvils, they would know perfectly well which to buy. In the one case the seller of hammers, in the other the seller of anvils, would get their money.

Most economic problems, as pointed out many times already in this volume, relate to the problems of more or less, of improvement or deterioration, of readjustment of existing equipment, organization, etc. If the blacksmith were ever called upon to decide whether to get along with an anvil without any hammer, or with hammers without any anvil, there might be some point to the comparison. The question which he has to decide is how to balance his equipment so as to have hammers and anvils well adapted to one another. If he were to find that he could improve his work slightly by having another hammer, but that he could gain nothing by buying another anvil, there is not much doubt that he would be more likely to spend money on hammers than on anvils. He would not spend much time puzzling over the abstract question as to whether hammers or anvils are the more productive. Similarly, if a farmer found that he could increase his crop more by having extra help than by having more land, he would be more likely to offer wages to someone than to offer rent to someone else. If farmers generally felt that way about it, wages would be high and rent low. Under the opposite conditions rent would be high and wages low.

Diminishing returns from land. Under the law of variable proportions, or that special phase of it known as the law of diminishing returns from land, it is actually found that in a community where there is an abundance of good land but a scarcity of labor to work it, one or more laborers added to

the existing number make a considerable difference in the crop. That is a sufficient reason for paying high wages to labor. Additional laborers are very much needed; the agricultural situation would be very much improved by having more laborers and very much injured if any were lost. The question of more laborers or of fewer laborers is one of considerable importance.

On the other hand, where land is so abundant and laborers are so few that it is difficult to cultivate the existing land, it would not be of much advantage to production to have a few more acres nor much of a disadvantage to have a few less. The question of more or less is not, in this case, very important. This is the question which presents itself to the practical farmer. The question as to which is absolutely more important, land or labor, is one which occurs only to armchair philosophers. This would be in all respects like the question as to which does more of the cutting, the upper or the lower blade of the scissors.

Shares generally divided into wages, rent, interest, and profit. It simplifies the problem somewhat to classify those who take part in the contemporaneous division of labor according to the functions which they are supposed to perform. It is customary to divide them into four main classes. The first class is made up of the laborers, who work either with their hands or with their heads and receive their share in the form of wages or salaries (for the sake of simplicity, salaries are in this chapter included under wages); the second class is made up of the landowners, who furnish the land and receive rent; the third class is made up of the capitalists, who supply the capital and receive a reward in the form of interest; and the fourth class is made up of the independent business men, who undertake to assemble all the other factors,—who take the chief risks of the enterprise and receive whatever is left over after all the others are paid, calling it profits.

Several functions sometimes performed by the same man. Any or all of these functions may be performed by, and any or

all of these shares may go to, the same man. In many small enterprises the independent business man does his own work and is therefore a laborer, owns his own land and is therefore his own landlord, and furnishes his own capital and is therefore his own capitalist. A very large proportion of the total business of the nation is done in this way. The typical farm in the northern half of the country comes under this description, as do also many small shops and stores in country towns and a few even in the larger cities. But even the farmer, as well as any other business man who does a part of his own work, may hire additional help and pay wages, though getting wages for himself. He may also rent additional land, though owning some land of his own and getting rent for it. He may borrow additional capital, though owning some capital of his own and getting interest on it. In fact, we can find every possible variation, from the enterprise where every function is performed by the same man to that where no one performs more than a single function. An example of the latter would be the enterprise where laborers do all the work and receive nothing but wages or salaries; where someone else is the landowner, furnishing nothing but land and receiving nothing but rent; where another man or group of men furnishes nothing but capital and receives nothing but interest; and where still another man or group of men assumes the risks of the enterprise, invests the borrowed capital on the rented land, hires the labor, buys the raw materials, and undertakes to find sale for the finished products. Labor, land, capital, and business management are commonly called the factors of production. There are, as a matter of fact, many kinds of labor, each kind performing a special function, and also many kinds of land, capital, and management; but it would be very inconvenient to carry on a discussion if we attempted to name each and every kind. Therefore it is customary to speak of only four factors of production.

How important is any factor of production? We may say in general that when one factor of production is oversupplied in proportion to the others which need to be combined with it,

the question of getting more of it or even of maintaining the existing supply becomes unimportant. Accordingly not much will be paid in order to get more of it or even to hold the existing supply. But when any factor is undersupplied in proportion to the others which have to be combined with it, the question of getting more of it or of holding the existing supply becomes very important. Accordingly, a high price will be offered for it.

This principle applies not simply to labor, land, capital, and management but to the different kinds of each. If there is a scarcity of skilled labor in proportion to the unskilled labor which has to be combined with it, it becomes very important to get more skilled labor or at least to keep the existing supply. In that case a high wage will be offered for skilled labor. Under the same conditions there is, of course, a large supply of unskilled labor in proportion to the skilled. It is therefore not very important that there should be more unskilled labor nor even that the existing supply should be kept from diminishing. Additional unskilled laborers, under these conditions, add very little to the physical product, and the loss of a few would subtract very little. Not much is likely to be paid, under such conditions, for unskilled labor unless by philanthropic persons. The next question is, What determines the relative supply of the various factors of production? The relative shares of the total which will go to each factor will depend mainly on how they are balanced in the productive process. The factor which is scarce relatively to the opportunities for its advantageous use in combination with the others will command a large share; the factor which is abundant relatively to the opportunities for its advantageous use in combination with the others will command a small share.

CHAPTER XXXV

WHAT DETERMINES THE RATE OF WAGES?

Causes of differences of wages in different occupations. Let us consider, first, the causes of the difference of wages in different occupations. If in order to get efficient production it is found necessary to have a high degree of specialization, many different kinds of skill will be found in the same establishment, each kind contributing its share toward the production of the same product. Men possessing these different kinds of skill will be needed in slightly variable but fairly definite proportions. In the production of cloth, for example, spinners and weavers will be needed in fairly definite proportions. If by any accident it could happen that for a period of time there were more spinners than were necessary to supply yarn for the weavers, the value of each spinner would be considerably reduced. Under these conditions, if they could exist, it would be literally true that a few less spinners would be little loss, provided the remaining spinners could still supply all the yarn the weavers could use. On the other hand, the labor of each weaver would be of considerable value.

Since there would not be weavers enough to use all the yarn that could be produced, one less weaver would reduce the total production of cloth, and one more weaver would add to the total production, assuming that machinery and room were available. Under these conditions there would grow up in any free community a difference in wages in favor of the weavers and against the spinners. This would be called the law of supply and demand. This law, however, rests upon certain fundamental advantages and disadvantages, sometimes of a physical nature and generally independent of the social system or the

form of business organization. The addition to the total output of cloth which would result from an increase in the number of weavers would really be much greater than the addition which would result from an equal increase in the number of spinners. This would be a sufficient reason why a higher price should be offered for the labor of weavers than for that of spinners. In the absence of compulsion this would be the only way of attracting more weavers and fewer spinners.

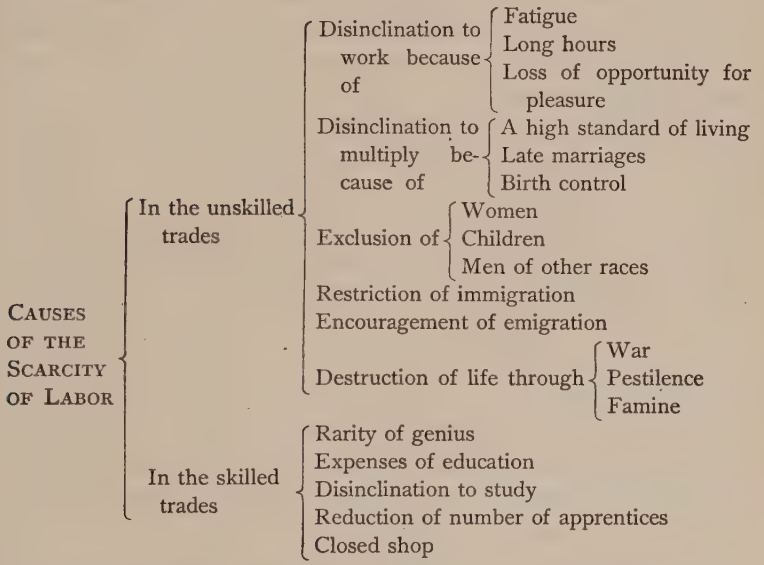
Of course this condition would soon correct itself. If the wages of the weavers were allowed to go up and the wages of the spinners to go down, some of the spinners would have an excellent reason for changing their occupation. If they could not easily do so the oncoming generation of laborers, who have to choose between the occupation of weaver and that of spinner, would be attracted into the one where the wages were higher, and thus restore the equilibrium. But if wages were not allowed to readjust themselves and, through some compulsion on the part of the government or some other agency, all mills were forced to pay as high wages for spinners as for weavers and to hire all who applied, then there would be no reason why the oncoming generation should go into the occupation where they were most needed. They would simply choose the one where the work was most agreeable. There is therefore a genuine social utility to be achieved by the difference of wages which would grow up under the law of supply and demand. It would tend to attract laborers into the occupation where more men were needed and to discourage them from entering the occupation where more men were not needed. This will be found to be the fundamental reason why wages are as a matter of fact higher in some occupations than in others. Where the ordinary processes of bargaining are not interfered with, wages tend to be high in those occupations where more men are needed, and needed badly, and low in those occupations where more men are not needed, or not needed seriously. The function of these differences of wages is to restore the equilibrium between different occupations.

Cost of acquiring skill. If there is some permanent obstacle in the way of a free choice of occupations, there may be a permanent difference in the wages in different occupations, based upon an undersupply of labor in one and an oversupply in another. If, for example, a certain occupation requires a kind of skill which is not widely distributed or easily acquired, whereas another occupation requires a kind of skill which multitudes of people possess or can easily acquire, there is likely to be a permanent undersupply of the one kind of labor and a permanent oversupply, at least relatively, of the other. The cost of training or the difficulty and irksomeness of the necessary study and practice will serve to limit the number of people who succeed in entering the highly skilled occupations.

In this respect the cost of acquiring the necessary skill acts very much as does the cost of producing a material commodity. As the price of the material commodity must be high enough to cover the cost or to overcome the disinclination to the work of production, so the wages of labor in a highly skilled occupation must be high enough to serve as an inducement to the labor and study necessary to acquire the skill or to overcome whatever disinclination there may be to the preliminary work of study and practice. If this cost is high the wages must be correspondingly high; if the cost is very low, so that practically no one is deterred from entering the occupation, the wages will be correspondingly low.

Some skill is absolutely limited. There may, however, be certain kinds of skill which are so scarce as to be almost incapable of being increased. Certain kinds of work may require a man of genius rather than a man of mere training. But in most cases it will be found to be a matter of training. An indefinite number of men could be trained for almost any occupation if the wages were only high enough to furnish a sufficient inducement. This, however, will depend somewhat upon the opportunities for education and training. Under a system of free public education the cost of training is greatly reduced and should naturally greatly increase the supply of highly

skilled labor. Where the money cost of education is eliminated, the only cost remaining is the irksomeness of hard study. Those to whom this irksomeness is very slight will naturally be attracted into the more highly paid occupations. There may, however, be artificial restrictions in the way of entering certain well-paid occupations. If a group of laborers in one of those few occupations where something resembling the apprenticeship still prevails should limit the number of apprentices, that would of course limit the number of laborers who



could acquire skill enough to follow the occupation. In other cases the policy of the closed shop might be carried to such an extreme as to reduce the supply of labor in the given occupation and thus prevent the readjustment of the supply of labor to the demand. The tendency of freedom, however, is to encourage the automatic readjustment of the supply of labor to the demand.

These are the principal factors which determine the excess in wages of the skilled trades and occupations and the learned

professions over and above those paid in what are known as the unskilled occupations. By an unskilled occupation is meant, however, one which requires a kind of skill which practically everybody can acquire without much special study. There is skill involved in the handling of a spade or a woodman's ax, as any inexperienced person will find if he tries to use one or the other effectively, but it is a kind of skill which large numbers of people acquire easily, and therefore the supply of such skill is so great as to keep wages down to the unskilled level. We have, therefore, the problem of finding out what determines the wages of this general mass of unskilled labor. What is there here which corresponds to the cost of producing a material commodity or to the cost of acquiring the skill required in one of the well-paid occupations? The factors which take the place of cost of production here are, first, the disinclination to work and, second, the disinclination to multiply.

Scarcity of unskilled labor. Among the vigorous European and American stocks the disinclination to work is not so very great. Nevertheless, there is an appreciable quantity of labor which is chronically withdrawn from productive work by reason of this factor. That part of the leisure class which is made up of people who have inherited, acquired by marriage, or otherwise come into possession of sufficient wealth to enable them to live without work shows this disinclination rather clearly. There are also the chronic loafers, the tramps, and the nomadic element among us, who show a strong disinclination to work and do so only under strong temptation.

The disinclination to multiply is unfortunately strongest among those who possess the most forethought. Those who live only in the present, who have no regrets for yesterday and no fears for tomorrow, generally give way to their primal impulses and multiply almost as rapidly as is physiologically possible. Those, however, who look to the future, not only of themselves but of their children, who foresee the disadvantages which their children will suffer if they are insufficiently nourished or inadequately educated, generally have smaller

families than are physiologically possible. The multiplication of numbers among such people becomes in part a moral process instead of a purely animal process. Family-building takes the place of spawning. Marriages of those who take thought for the future are postponed until they are able to support and educate their children.

The standard of living. The group of motives and factors which serve to hold the procreative instincts in check is generally known as "the standard of living." This is a somewhat technical term in economics and requires some careful explanation. Technically the term "standard of living" means the number of desires which, in the average person of the class in question, take precedence over that group of desires which result in the multiplication of numbers. For purposes of discussion we will call the latter group of desires the domestic instincts. When the domestic instincts act powerfully and without opposing motives sufficient to hold them in check, the individual will undertake the support of a family before he is assured of a sufficient income to satisfy any but the most elementary desires. Under these conditions he is said to have a low standard of living. In his case there are very few other desires which take precedence over the domestic instincts. The individual of whom that is true will accordingly marry and undertake the support of a family as soon as he has sufficient income to satisfy that other small group of desires. In other cases a large number of other desires take precedence over the domestic instincts. An individual of whom this can be said will not marry and undertake the support of a family until he feels reasonably certain of being able to satisfy all these other desires. He is said to have a high standard of living; that is, an expensive standard.

If we can imagine a community to which immigrants from the outside do not come and in which the average unskilled laborer has a high standard of living, we shall have a community in which the average laborer will not marry and undertake the support of a family until he is sure of wages high enough to

satisfy a large number of desires. If the average individual, however, has a low standard of living he will marry and undertake the support of a family on low wages; that is, wages that are just high enough to secure him the means of satisfying a small group of desires. If the unskilled laborers of the community have a high standard of living the average age of marriage will be a little higher and the average size of the family a little smaller, so that the rate of multiplication will be materially slower than would be the case if they had a low standard of living. The rate of multiplication being slower, the oncoming supply of labor is less, and in the succeeding generations laborers will thus be able, through the smaller supply, to continue to get high wages. If wages are low to begin with they will refuse to marry or will defer marriage to such a late age as to reduce the supply of labor and thus force wages up to a level which will enable them to maintain their standard. If the standard of living, however, is low and the rate of multiplication correspondingly high, wages tend to continue low. Even if wages are temporarily high, unless the standard of living should rise quickly, the rate of multiplication will so increase through early marriages and large families as to oversupply the labor market and force wages down again until they are just sufficient to maintain the low standard of living.

Standard of living affects the price of labor as cost of production affects the price of a commodity. From the foregoing discussion it will be seen that the standard of living affects the wages of the general mass of unskilled labor in precisely the same way as the cost of producing a material commodity affects its price. Wages must be sufficient to overcome the disinclination to marry and produce families. This disinclination, however, is the joint product of a number of conflicting desires. In an elementary sense there is a strong inclination to marry rather than a disinclination, but the inclination to marry is held in check by the desire of the individual for consumers' goods of his own. If he realizes that with a family to support he will have a little less money to spend on himself, or that

if his family is too large he will have less for each one of them and may not be able to educate them, such considerations will create a disinclination which may more than balance the inclination toward marriage. A real safeguard against low wages, therefore, is a high standard of living, which will check somewhat the tendency toward early marriages and large families. How far this should go is always a serious question. No one advocates so low a standard as would cause multiplication to take place as rapidly as is physiologically possible. If that were the case marriages would take place at the age of puberty, and women would be continually engaged in the functions of motherhood as long as childbearing was possible. Nobody would favor that. Everybody favors some kind of standard of living and some postponement of marriage. It is only a question as to how high a standard and how much postponement is desirable.

The law of population. This brings us to the great law of population, which has generally been associated with the name of Malthus. The law which Malthus worked out and which has never been successfully refuted, though many attempts have been made, may be briefly stated as follows:

1. Every species of plant and animal has the physiological power to multiply faster than its means of subsistence will permit. Subsistence is the factor which actually limits numbers.

2. The physiological power of human increase is also so great that if it should operate without moral or social restraints of any kind, it would carry population to such limits that vice or misery or both would begin to thin out the surplus population and thus operate as a check upon further increase.

3. Owing to the law of diminishing returns, a larger number of people cannot, in any given state of civilization and the industrial arts, be so well provided for from the produce of a restricted area of land as a smaller number can.

4. There is a strong natural instinct which inclines the members of our species to the multiplication of numbers, and unless this is counteracted by other motives, it will lead to an increase

of population beyond the limits within which comfortable subsistence is possible.

5. This natural instinct is, however, opposed and held in check by several contrary motives, not the least important of which is the desire for the goods which one has been accustomed to consume, coupled with the perception on the part of each head, or would-be head, of a family that a larger number of children means a smaller share of the necessaries, comforts, and luxuries of life for each one; and this keeps the rate of increase far below that which is physiologically possible.

6. How rigidly the increase of numbers is held in check by this motive depends upon people's ideas as to what is essential, in the way of incomes, to their happiness,—in other words, upon their standard of living. It is the standard of living, therefore, which determines the rate of increase of population, given the amount of wealth and the possibilities of production. It plays the same part in determining the supply of labor which the cost of producing commodities plays in determining their supply.

Refinement of the law of population. While this general law has never been successfully refuted, and is accepted by every economist of any standing, some refinements have been found necessary. For example, it makes a great deal of difference in what stratum of society the increase in population takes place. There might be such a thing as a considerable increase in the total population that would result in a considerable increase in the rate of wages of unskilled labor. If we could double or treble or quadruple the number of people in what are known as the employing classes (that is, the professional men and, more particularly, the successful entrepreneurs and independent business men), the competition among these business men would take several forms. In order to equip and man their establishments they would have to bid against one another to get labor and also to sell their products. This would tend to bring up the price of labor and to bring down the price of products,—in other words, to leave a narrower margin of

profits on which business men would have to live. For example, recent immigrants into the Philippine Islands from America have not been unskilled laborers but skilled laborers, engineers, technicians, and business men. This has added somewhat to the population of the Philippines, but at the same time it has increased the demand for unskilled laborers and has therefore tended to improve their condition. Whether the increase in the higher economic grades comes through immigration of these grades, a higher birth rate among the educated classes, or better systems of education, the results are much the same.

Effect of immigration. We began our discussion of the effect of the standard of living by assuming a country to which no immigrants came. However high the standard of living of the native laborers or however strong the tendency of the educational and social system to raise the standard of living, if large numbers of immigrants with a low standard kept coming in, it would keep the standard down to a low level. At any rate the oversupply of unskilled labor would tend to keep wages down. Their coming would tend to make business conditions easier for men who need to employ unskilled labor, but to make conditions very much harder for the unskilled laborers who are already there. If, however, the immigrants resemble those Americans who go to the Philippine Islands (that is, if they belong to the skilled, the professional, and the employing classes), they tend to make conditions easier for the unskilled laborers but harder for the skilled, the professional, and the employing classes who are already there.

Noncompeting groups. This brings in the principle known by various names, such as the principle of noncompeting groups or that of joint demand. In the case of material commodities it sometimes happens that two or more articles have to be combined to supply the same demand,—such as sugar and cranberries, bread and butter, etc. If sugar is so scarce and so high that people cannot afford to buy it, there will be less demand for cranberries; but if sugar is abundant and cheap, so that everybody can afford to buy it, there will be

an increased demand for cranberries. In the field of production we get much better illustrations than in the field of consumption. It frequently happens that several different kinds of material have to be combined in the making of a single product,—coal and iron ore, for example, in the making of steel. If coal were scarce and very expensive, and other kinds of fuel likewise, the best iron ore in the world would be of very little use and would have to sell, if it sold at all, at a very low price. With cheap and abundant coal the value of ore beds tends to rise. The same principle applies to different types of labor. Managerial skill, technical skill, and manual labor have to be combined in the production of many manufactures. If there were no manual labor to be had, managerial skill and technical skill would be of very little use; with an abundant and cheap supply of manual labor these other forms of skill become enormously valuable to their possessors. Conversely, with no managerial and technical skill to go with it, manual labor would be worth very little in our industries; with an abundance of managerial ability and technical skill large quantities of manual labor can be utilized and many industries can start. The first and most important refinement to be made in the doctrine of population, therefore, is to point out that the question of absolute number is not the only question involved,—that the question of the occupational distribution of numbers must be taken into account. When the increase in numbers takes place among the unskilled laborers, it works to their disadvantage but to the advantage of those who belong to noncompeting groups, say the technically skilled and those possessing managing ability; but when the increase in numbers takes place in the higher economic classes, it works to the advantage of the unskilled laborers.

Summary. The discussion thus far may be summarized as follows:

1. The wages of any person will depend upon how much his labor is desired. The wages of any class will depend upon how important it is thought to be that there should be more laborers

of that class, or that there should not be any less. High wages indicate a strong desire and low wages indicate a weak desire to have *more* of a certain kind of work done.

2. Different kinds of labor usually have to be combined in fairly definite but somewhat variable proportions. If there happens to be more of a certain kind than will combine satisfactorily with the existing supply of the other necessary kinds, the oversupplied kind will not be strongly desired. There will be no great need for more of it and therefore no strong reason for paying high wages. The kind of labor, however, which is undersupplied will be much more needed. There will be a strong reason for desiring more of it, and the only way, in a free society, to get more of it is to offer high inducements. High wages are a powerful inducement.

3. Labor which requires a kind of skill that is difficult to acquire will usually be scarce, relatively to the need for it. Wages must be high enough to induce men to make the necessary effort in order to fit themselves for the work.

4. Unskilled labor is usually abundant, being limited only by the disinclination to work and the standard of living or the cost of bringing up children. Where the cost is high, or the unwillingness great, wages must be high enough to induce men to marry and bring up children. When the cost is low and there is very little unwillingness to overcome, wages may be low because men will bring up children on very low wages and thus keep the supply of labor intact.

CHAPTER XXXVI

THE ORGANIZATION OF LABORERS

Comparative advantages in bargaining. It has long been recognized that in the ordinary bargaining process between laborers and their employers, the laborers are at a disadvantage. The reasons why they are at a disadvantage have been variously stated. It is argued, for example, that the capitalist can wait longer than the laboring man, and thus wear the laboring man out and force him to give in and accept the capitalist's terms. The capitalist, it is said, having an accumulation of wealth, can live on that accumulation. There is doubtless something in this argument, though it is easy to exaggerate it. If the capitalist's accumulation is in the form of buildings and machinery, it is difficult to see how he can live on these things. He might borrow money on the basis of the security which they furnish, and with this borrowed money buy consumers' goods.

It is not so much the fact that he is a capitalist as it is the fact that he has greater borrowing facilities that gives him this advantage. If instead of owning capital he owned consumers' goods in considerable quantities,—if he owned, for example, his own house, if he had insurance policies or deposits in the savings bank,—he would have the same or even greater waiting power than he has when he owns capital of equal commercial value. It is therefore frequently argued that one remedy for this situation is for the laborer himself, as far as possible, to acquire his own home, life-insurance policies, and deposits in savings banks. This would help, at any rate, to give him the power to wait and would thus help to even up the advantages in bargaining. But the objection to this is the simple observed fact that the laborers have less property of any kind than their employers; otherwise they would not be laborers. This being

the fact, it does not help much to point out what the laborer might do if the facts were otherwise.

Another reason given for the disadvantage of the laborer in the bargaining process is that he is usually less skillful in the matter of bargaining than his employer. His expertness is more likely to consist of manual skill than of skill in bargaining. The entrepreneur is peculiarly a bargaining person. He literally bargains for everything. If he borrows capital, if he rents land, if he buys raw materials, secures transportation rates, and hires labor, or organizes a selling department,—every part of his work has to do with bargaining. He becomes, therefore, the bargainer par excellence. Those whose expertness lies in other directions are therefore at a disadvantage when they come to deal with him. This argument is undoubtedly correct as far as it goes.

Employers are few, but laborers are numerous. The third fact, however, which sometimes militates to the disadvantage of the laborer and the advantage of the employer is that laborers are sometimes numerous and employers are few. Where this is the case there is more competition among laborers for jobs than among employers for men. Wherever this fact does not exist, there is no great advantage on the part of the employer. One conspicuous example would be that of domestic servants. The employer in this case doubtless has more power to wait than the maid. The employer may, on the average, be somewhat more intelligent than the maid. Nevertheless, he has no great advantage in bargaining, for the simple reason that there are approximately as many employers as there are employees. Observation seems to show that, in this country at least, it is far more difficult for an employer to find a maid than for a maid to find an employer. When they meet to arrange terms, there is no visible advantage on the side of the employer or disadvantage on the side of the employee. In fact, it sometimes appears that the advantage and disadvantage are of the opposite kind. There is at least a reasonable number of cases where the employee is very independent and must be

placated by an almost obsequious attitude on the part of the employer. A multitude of other illustrations might be given, which in the aggregate seem rather important, though as compared with the number of cases where the employer is at an advantage and the employee is at a disadvantage they are probably insignificant. Nevertheless, one can safely say that wherever laborers are few as compared with the number wanted, their bargaining power is great, their wages high, and their conditions satisfactory.

It appears, therefore, that the fundamental and permanent remedy for the laborer's disadvantage in bargaining would be such a reduction of the number of laborers and such an increase of the number of employers as would give the labor at least an equal advantage in the bargaining process. This remedy, however, like all fundamental and permanent remedies, is slow and difficult to bring about. It is slow in the sense that it would take a generation or so to bring it about; it is difficult, not for economic but for political and social reasons. Economically it is perfectly easy; politically it is difficult simply because it would be difficult to get a majority of the voters to vote for such a policy. It might take several generations before a majority vote could be secured for a constructive policy of this kind. Meanwhile the existing laborers would still be at a disadvantage and in need of relief. It would be cold comfort to them to point out that future generations of laborers may be exceedingly well off if the right policy is adopted. Therefore they are inclined to take matters into their own hands and adopt a more speedy remedy, even though it be less fundamental and less permanent.

Collective bargaining. This remedy is that which is known as collective bargaining as against individual bargaining. In a trade where laborers are oversupplied, each individual laborer is in a weak position because he can easily be spared. He is almost superfluous; he is certainly not indispensable. If he stops working or leaves the community he will scarcely

be missed. Industry will go on approximately as well without him. Because there is a superfluity of labor his place can easily be filled. Under such conditions his bargaining power is very weak; he is practically compelled to take whatever terms are offered to him. His kind of labor as a whole, however, may be absolutely indispensable. While he as an individual could be spared without much inconvenience, the members of his trade are absolutely indispensable, when considered as a whole. If they were all to stop work, business would have to stop; if they were all to emigrate, the whole business in which they were engaged would be permanently destroyed.

The group may be indispensable, while the individual could easily be spared. The fundamental principle involved in the trade-union policy of the present is the substitution of the indispensable group as a bargaining unit for the dispensable individual. Since the group as a whole is indispensable to industry, if they can bargain as a whole the laborers are in a strong position. As a group they cannot possibly be spared. The difficulty, however, has always been to hold the group together and get them to bargain absolutely as an indispensable group and to refrain from making individual bargains independently of group action.

The trade union. This underlying principle has given rise to one of the largest social movements of modern times; namely, the organization of laborers. Several types of organization, however, have entered the field, and there is still some rivalry among them. In the first place, there is the trade union pure and simple; this is an organization of the men who ply the same trade (that is, the men whose work is of the same kind). The Brotherhood of Locomotive Engineers is an example of this kind of organization.

The industrial union. In the second place, there is the industrial union, which includes all the laborers plying various trades who are engaged in the same general line of industry. The United Mine Workers of America is one example of this type

of organization; the Brotherhood of Railroad Trainmen of America, which attempts to take in all the railroad workers, is another.

The labor union. A third type of organization is what may be called the labor union, which attempts to organize all laborers, of whatever trade or occupation and in whatever industry they may be engaged. The Knights of Labor were an organization of this type, and lately the Industrial Workers of the World have attempted a similar type of organization.

The federation of trade unions. The trade union seems in recent years to have been somewhat stronger than either the industrial union or the labor union, but it has felt the need of some larger and more nearly universal type of organization. This has been secured by the federation of trade unions into a national organization known as the American Federation of Labor. This type of organization recognizes that each trade has certain special and peculiar interests of its own and therefore has a special reason for organizing as a trade. This is a principle which seems to be ignored by the labor union especially. By organizing the special and peculiar interests of each trade the federation becomes stronger at this most vital point. By federating the different trades for the furthering of the interests which are common to all it becomes stronger at another important point; namely, with respect to the need of concerted action on a nation-wide scale.

The attempt to ignore the special interests of each trade and to unite all workers, of whatever trade or industry, into one universal, undifferentiated organization has had certain idealistic features which make a strong appeal to men of idealistic temperament. There is the attempt to ignore any possible rivalry of interests among different classes of laboring men. While this sounds attractive it hardly accords with the observed facts. It is perhaps a little more humanitarian in its philosophy but a little less effective in its methods of work. It might be compared to an attempt to create a unified nation by ignoring all local interests and internal conflicts, whereas the

federation idea might be compared to a system of government which would recognize local and state interests and allow a certain amount of self-government to the local units, but which would unite them all under a national government for the carrying out of national aims.

Necessity of controlling the supply of labor in its own market. As in all attempts in all fields to bargain to better advantage for the sale of either a commodity or a service, an organization of laborers must get control of the supply of the service which it is trying to sell. This leads to the policy of the closed shop; that is, the policy under which none but members of the organization are to be employed in a given shop or series of shops. If any considerable number of outsiders are permitted to work in these shops, they will of course bargain independently and be in a weak position. That very fact also tends to weaken the power of the organization in the bargaining process. Unless the organization can control the supply of labor which is permitted to work in a given trade,—can withdraw them as a body or put them back as a body,—it will find itself unable to secure advantageous terms. If, for example, there were so many nonunion laborers available as to make the employer more or less indifferent as to whether the members of the union worked as a body or withdrew as a body, he would not be likely to pay much attention to the demands of the union. If he knew that, even though the union as a body withdrew from his shop, he could easily fill places with nonunion men the bargaining power of the union would at once be destroyed.

The closed shop. An absolutely closed shop is very difficult to maintain when there is a surplus of laborers available for a given occupation. So long, for example, as indefinite numbers of foreign-born laborers can be had for the recruiting of the ranks of any trade, nothing but the most drastic measures on the part of the organization of laborers can preserve its control. It is sometimes necessary, from their point of view, to use a good deal of persuasion, and this persuasion is sometimes of a rather severe nature and often virtually amounts to compulsion.

The strike. The strike has become one of the drastic methods through which an organization of laborers may enforce its control over the labor supply. Theoretically the strike is merely the suspension of work by the laborers of a given trade or group of trades. If there were no waiting list and no available mass of laborers from which to fill the shops which the strikers have vacated, a mere quiet suspension of work would be all that would be involved in a strike. This, however, is seldom the situation. There is generally such an oversupply of labor, especially of the unskilled kinds, as to force the strikers to do something else besides the mere suspension of work. They must manage somehow to keep others from taking their places. This may take the form of peaceful picketing and persuasion; it may take the form of threats; and, in extreme cases, it may take the form even of violence and terrorism. It is to be remembered, however, that threats, violence, and terrorism are necessary, even from the laborer's point of view, only when there is an oversupply of labor available for the jobs of the strikers. The ultimate cure for this situation is that which was suggested earlier in this chapter,—such a thinning out of the number of laborers, especially in the unskilled occupations, as to reduce the number of men to an approximate equality with the number of jobs.

In justification of the strike, even when accompanied by threats and violence, it is sometimes euphemistically stated that the laboring man has a right to his job and no other laboring man has a right to take it away from him. Or, as it is sometimes put, the labor unionist's eleventh commandment is, Thou shalt not steal thy neighbor's job. This, however, is not quite complete; it really should read, Thou shalt not steal thy neighbor's job unless he is a nonunion man, and in that case thou shalt go after it with a club.

Numbers make for weakness in bargaining but for strength in fighting and voting. One large fact which complicates the whole problem of the organization of laborers and their methods is that those who, because of their numbers, are weak in the

bargaining process become, by virtue of those same numbers, strong in the making of public opinion and in the election of candidates for office. Roughly speaking, one may say that the more people there are of a certain individual type, the weaker they are in the process of individual bargaining but the stronger they are in making public opinion and controlling elections. It is pretty certain, therefore, that they will use their strength in controlling public opinion and politics to compensate for their weakness in the bargaining process. Whatever our views on the purely ethical aspects of such questions as the closed shop, the strike, picketing, threats, and violence, we must realize once and for all that in a republic, where majorities control, there is absolutely nothing to be done about it. Those who realize that they are weak in the process of peaceful individual bargaining but strong in other ways can be depended upon to use that strength to their own advantage. On the other hand, those who, because their numbers are few, are very strong in the process of peaceful and individual bargaining must realize that politically they are very weak, since they have very few votes. It would be as futile, therefore, to expect that when there is an oversupply of labor the laboring men will go on indefinitely, bargaining individually for jobs, accepting the disadvantages under which they labor, and refraining from using the strength of numbers in their own interests, as to expect that the tides should cease to rise and fall or the winds to blow.

When a numerous class realizes that its numbers count against it in bargaining but for it in fighting and voting, it is pretty certain, sooner or later, to try to win back, by fighting or by voting, what it has lost in bargaining. Therefore there are two very good reasons why we should try to maintain a balanced population. By a well-balanced population is meant one in which, among other things, each occupational group is no more numerous than is necessary to combine with other occupational groups. If, for example, there are no more spinners than are needed to supply yarn for the weavers, no more of both than are required to combine satisfactorily with other

groups, no more unskilled laborers than are necessary to work in combination with the skilled laborers, no more of both than are necessary to work in combination with salesmen, accountants, managers, etc., the population is well balanced so far as these groups are concerned. When this is the case no group will be at a disadvantage in the bargaining process. That is one reason. The other is that no group would have the motive or the power to win back, by fighting or by voting, what it was losing by bargaining. Such a balancing of our population would eliminate the more acute phases of our labor problem.

CHAPTER XXXVII

THE RENT OF LAND

Rent the price paid for the use of land. The rent of land originally meant the price paid for its use during a given period of time. Its meaning is now extended to cover the income which the owner derives from it, whether he uses it himself or lets it out to someone else. The selling price of land is the price paid as a lump sum for its permanent possession, which includes its use through all future time. Its value is the present estimate of all its future utilities, whether they are sold or kept by the present owner and his heirs. There is thus a very close connection between the value, or price, of land, on the one hand, and its rent, on the other. The rent is the value, or the price, of the flow of utilities which it yields during a given period of time, such as a month or a year. Both the value and the rent of land come under the general law of value; both are determined by utility and scarcity, as is the case with all forms of value.

Why rent is paid. The utility of land is of various kinds and degrees. In some cases land yields its utilities directly and is thus a consumers' good, or at least resembles consumers' goods in this respect. Parks, pleasure grounds, and residence sites yield their utilities in this way instead of yielding tangible products. In other cases land yields its utilities indirectly; that is, it produces or helps to produce tangible products which are themselves useful. In these cases the utility of land, like that of all producers' goods, is a derived utility. Its utility is derived from that of its products.

There are great differences in the utility or desirability of different pieces of land, whether they be used for one purpose or for another. In one of the chapters on land (Chapter XVI) it was pointed out that these differences are mainly in location

and fertility. The other qualities which make land usable, such as extension and solidity, all land possesses in equal degree, so that these qualities do not make one piece more desirable than another; but in the qualities of location and fertility there are great differences, and these differences powerfully affect its desirability and its value.

Differences in the desirability of land. The problem of rent may be approached in several ways. In the first place, we may concentrate our attention on the differences in rent or the differences in the desirability of different pieces of land. There is always land somewhere the use of which can be had free of charge. Nevertheless, men will be found paying high rents for other land which is more desirable than that which can be had free of charge. The fact that it is more desirable than the free land is what makes it command a rent. In the case of land which is useful for production only, its desirability is of course determined by its productivity. He who secures the use of a superior piece of land can either produce more at the same cost than would be possible on the kind of land which is free or he can produce the same amount at lower cost. This difference in productivity gives its owner a rent when he cultivates or uses it himself, and enables a tenant to pay rent in case the land is worked by a tenant.

Location as an element in desirability. That the location of a piece of land will affect its productivity will be clear to anyone who will consider that the cost of transporting goods to market is a part of the cost of production. If one farm is so badly located with respect to railroads and markets that it costs ten cents a bushel to haul the wheat to the nearest railroad, while another farm is so well located that the hauling costs only two cents a bushel, it is evident that if the two farms are equally fertile the former will be worth considerably less than the latter. The difference of eight cents a bushel in the cost of haulage would make a difference of $2.40 per acre if the average crop on the two farms were thirty bushels per acre. A tenant could

afford to pay that much more for the well-situated than for the badly situated farm.

If land were so abundant that the badly situated farm in the above illustration and other land equally desirable could be had rent-free, and if it were the most desirable land which could be had free, then land of this type might be called marginal land, or land on the margin of cultivation. By marginal land is meant that which, under the conditions of the market, men would be induced to cultivate if it cost them nothing, but which they would abandon and leave unused if they were required to pay even the lowest conceivable rent for its use. Under these conditions the rent of the well-located farm of the above illustration would be $2.40 per acre, assuming that wheat is the only crop.

The margin of cultivation. Aside from the productivity of the land, two other factors help to determine the margin of cultivation. These are the demand for products and the demand for labor, or the opportunities for the employment of labor. An increase in the demand for products will generally bring land into cultivation which would otherwise have remained idle, whereas a decrease in the demand for products will cause some poor land to be abandoned which would otherwise have remained in use. The margin of cultivation may change, however, for other reasons. When the prairies of the West were brought into cultivation the margin was extended in that direction, but this threw so many products on the market that some of the less productive lands of New England could no longer be advantageously cultivated. Much of this land was abandoned, and the margin of cultivation was contracted in this section. The extension of the margin on the Western frontier and the contraction on the rocky hillsides of New England tended to counteract one another. There was, however, at the same time a growing demand for products, so that the expansion in one direction more than made up for the contraction in the other. In other words, the total

production actually increased, despite the diminution on some of the New England farms.

Factors which extend the margin of cultivation. An increase in the supply of labor which is seeking employment, unless counteracted by a corresponding increase in the demand for it elsewhere, will generally extend the margin of cultivation and cause land to be cultivated which would otherwise remain idle. This problem may be approached from two points of view. In the first place, idle land may be regarded as an opportunity for idle men. When the supply of labor increases faster than the demand for it, the number of idle men increases. Some of these idle men are then crowded out onto the idle land. Even if they are not actually thrown out of work, the results are much the same. There is always a current of migration from the farms to the towns. When the labor market in the towns is overcrowded, country boys find fewer inducements to leave the country. Therefore they must perforce remain on the farms and cultivate the land. When larger inducements are offered in the towns, more of them leave the farms and less land can then be cultivated.

Another way of approaching this problem is by considering the wages of farm labor. When this labor can be had at a low cost, some land can be cultivated profitably which could not be if the same kind of labor cost more. Wherever farm labor is cheap we find that there is little land going to waste except the very poorest; where farm labor is expensive and hard to secure we find fairly good land actually going to waste. Only the best land can be profitably cultivated by expensive labor. It must be remembered, however, that labor is not necessarily expensive merely because wages are high. Very efficient labor may be cheap even though it is paid high wages, and very inefficient labor may be expensive even though it works for low wages. With this explanation it ought to be clear that with a given demand for farm products poorer land can be cultivated if labor is abundant and cheap than would be profitable if it were scarce and dear.

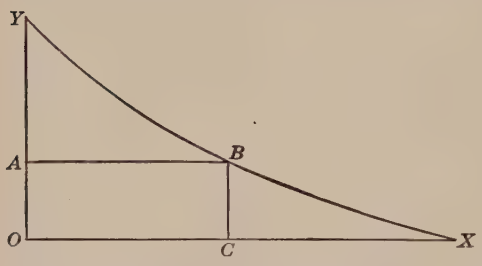
Different grades of land. A partial illustration of the doctrine of rent can be found in a study of the following table and the explanation which follows it. It is only a partial explanation, however, because it omits the law of diminishing returns. This lack will be corrected in the subsequent illustration and explanation.

Grade A, yielding 1000 units of product to 100 units of labor
Grade B, yielding 900 units of product to 100 units of labor
Grade C, yielding 800 units of product to 100 units of labor
Grade D, yielding 700 units of product to 100 units of labor
Grade E, yielding 600 units of product to 100 units of labor

Let us assume a miniature community possessing five grades of land, as indicated in the above figure. On the best grade of land, which is of limited extent, 100 units of labor will produce 1000 units of product; on the next grade, 900 units of product; on the next, 800 units of product; etc. If the demand of the community were for only 1000 units of product, and there were only 100 units of labor, only the best grade of land could be used. Until it was all in use there would be no rent. But if the population were to increase so that there was an increase in the demand for products and also in the supply of labor, Grade A would not continue to be sufficient. If, for example, the demand were to increase so that 1500 units of product were needed, some of it would have to be produced on the second grade of land, which would thus be the marginal land. On this marginal grade, however, each unit of labor would produce only 9 units of product, whereas on the best grade it would produce 10 units. Clearly each producer would rather work on Grade A than on Grade B. Because of this preference he could be persuaded to pay something for the privilege of

working on Grade A. Approximately 1 unit of product for each unit of labor would be paid for the privilege of farming on Grade A. An owner of a portion of Grade A who worked it himself would be better off than an owner of a portion of Grade B. This excess of his income over that of an equally good worker on Grade B would be rent just as truly as though he received it in cash from a tenant.

If the demand for products continues to increase until it requires 2 500 units of product, some of Grade C will have to be brought into use. This will now be the marginal grade. On Grade C, however, each unit of labor produces only 8 units of product. Rather than work on this land, producers will be willing to pay something for the privilege of working on either Grade A or Grade B. Each unit of labor will be willing to pay approximately 2 units of product for the privilege of working a portion of Grade A, or 1 unit for the privilege of working a portion of Grade B, rather than be forced to cultivate land of Grade C. In either case it will have as much left as it would have if it got the whole of the product on Grade C without any deduction for rent. If we go on assuming an increase in the population, and a consequent increase in the demand for products and in the number of units of labor available for the cultivation of land, we shall find each of the grades D and E in succession brought into cultivation, and the rent going up correspondingly on every grade except the marginal one.



Differences in productivity. The differences in the productivity of land may be represented or illustrated by the preceding diagram if it is understood that lands of different grades are ranged along the line *OX*, with the most productive piece of

land at the point *O* and absolutely barren land at the point *X*, with every variation between. If we measure the productivity of the different parcels on the line *OY*, the curve *YBX* may be called the productivity curve. When a total product represented by the surface *OAYBC* is to be produced, only the land between *O* and *C* will be required. That at the point *C* will be marginal land, and all between *C* and *X* will be unused. The line *BC* represents the productivity of the marginal land, and the surface *YBA* will represent the rent on all the other land in use.

Relation of diminishing returns to rent. This explanation, however, is incomplete, as any explanation of rent is incomplete unless it takes into account the law of diminishing returns. Even on the best land—in fact, on any grade of land—different applications of labor and capital produce different results. After a certain quantity of labor and capital has been applied to the cultivation of a given piece of land, further increases in the labor and capital do not yield proportionately increased returns.[1] If this were not true it would never be necessary to cultivate any but the best grade of land. If, for example, 200 units of labor on Grade A of the land described in the figure on page 519 would produce 2000 units of product, that would be better than to spread it over both Grade A and Grade B, where it would produce only 1900 units of product. Again, if 300 units of labor applied to Grade A would produce 3000 units of product, and 400 units of labor 4000 units of product, and so on indefinitely, we should have what are called constant as opposed to diminishing returns. If constant returns could be secured indefinitely, as stated above, it would never be advisable to cultivate any land but Grade A of our illustration.

But the simple and well-known fact is that increasing applications of labor and capital to the same land do not yield constant returns, much less increasing returns. Instead of 200 labor units' yielding 2000 units of product on Grade A, and

[1] As shown in Chapter XXXIII, on The Law of Variable Proportions.

300 labor units' yielding 3000 units of product, it is more likely that 200 units would yield 1800 units of product, and 300 units 2400 units of product, or some such quantity. If that were the case it would be better to take Grades B and C into cultivation rather than to put all the increasing labor supply onto Grade A. Unless something like this rate of diminution in the returns should result, the inferior grades would never come into use at all.

The value of land to the community. Thus far we have been considering the differences in the productivity of different grades of land as the reason why rent is paid and as the factor which determines how much rent is paid for land of a given grade. Another way of viewing it, which leads to the same result, is to consider how much better off the community is when a given piece of land is in cultivation than when it is not. If there is an abundance of uncultivated land in every way as good, location and everything considered, as the piece of land in question, the only result of withdrawing the latter from cultivation would be to bring into cultivation an equal quantity of other land. In such a case the community loses nothing when this piece of land is withdrawn from cultivation nor would it gain anything if it were brought back into cultivation. There being more land of this grade than can be cultivated, some labor must be withdrawn from other land when this piece of land is cultivated.

If, however, there is a scarcity of land of the grade of the piece in question, there is certain to be a decrease in the total production of the community if it is withdrawn from cultivation, and an increase when it is brought back into cultivation. If it is withdrawn from cultivation the labor and tools which were used in cultivating it must now find employment on other land. If they go onto poorer land, such as has been hitherto uncultivated, their product will be less. The production of the community is decreased by the amount of the difference between the product on the piece of land in question and the product on the poorer land. If the labor and tools go onto land

which is already under cultivation, they merely add to the number of laborers and tools already on that land and carry the margin of cultivation a little farther. They will add something to the product from that land, but not an amount equal to the total product formerly produced on the land which is now thrown out of cultivation. The difference between the total amount produced on the land now thrown out of cultivation and the amount which the labor and tools could add to the product from other land measures the loss to the community which occurs when the piece of land in question is thrown out of cultivation. This difference, however, corresponds to the rent of the land.

The law of rent. The rent of a piece of land, therefore, is determined by the difference between what can normally be produced upon it and what an equal amount of labor and capital can produce in less advantageous positions still open to them. These less advantageous positions may be found either by going onto the inferior lands still uncultivated or by crowding onto land already cultivated. The rent of a piece of land is thus seen to correspond pretty closely to its value to the community or the nation. It represents the net advantage which the community gains when the land is in use, or the net loss which the community sustains when it is not in use. This does not necessarily mean, however, that the rent of a piece of land represents the owner's contribution to the community or the nation, unless it can be shown that it was the owner that made the land productive.

Price of land derived from rent. It is a common fallacy to suppose that the selling price of land determines its rent, the fact being that the rent determines the price of land. Land that is so well located or that has such a high degree of fertility as to yield its user a large surplus over the cost of operation will, of course, command a high price; but it is the surplus, which is rent, that causes the high price, and not the price that causes the surplus. The surplus is caused by its good location, its high fertility, or some other physical or social advantage. The

price of land is the capitalized value of its rent or surplus. If the surplus or rent is once determined and the current rate of interest known, the price is easily reckoned by finding what sum, at the current rate of interest, will yield the amount of the rent. Thus, if the rent of a given piece of land is found to be, one year with another, ten dollars an acre, and the current rate of interest on safe investments to be 5 per cent, the price will be two hundred dollars an acre. Suppose, now, that the conditions change so as to reduce the surplus below ten dollars: the price must necessarily fall. That is to say, if the price of the products of the land should fall or the cost of operation or the rate of interest should rise, any or all of these would of mathematical necessity reduce the surplus. The process of capitalization would then, of mathematical necessity, reduce the selling price of the land. On the other hand, a rise in the price of products or a fall in the cost of operation or in the rate of interest would, for similar reasons, increase the price of the land.

Another popular fallacy is that a rise in the price of land is the cause of a rise in farm products, the argument being that when the price of land goes up, the farmer must get a higher price in order to recoup himself for the use of his more valuable land. This is like saying that the reason a tree is so tall is that its shadow is so long. The price of land is only a capitalization of the surplus which can be made by using land. When that surplus increases, the price must rise, as shown in the last paragraph. When the price of farm products rises, unless the cost of operation rises correspondingly, there is naturally a larger surplus, and this large surplus naturally makes land a more desirable form of property to own; consequently its present owners are less eager to sell and prospective owners are more eager to buy. This will necessarily send the price of land up. In other words, the rising of land prices follows as a result, and does not precede as a cause, the rising price of products.

It is frequently asserted, on the basis of this reasoning, that even rent is not a factor in determining price. In discussions of this topic two distinct questions have been stated, and the disputants have not always had the same question in mind. One question is, Would prices be any lower if landlords would remit rent? The rather obvious answer is No, but rent is not annihilated when landowners remit it. The rent still exists, but the tenants get it (or someone else); and there is no reason why the prices should be lower when one set of men gets rent than they would be if the rent went to another set of men. If the owner of a farm were to make a gift of it to his tenant, it is not probable that the tenant would sell his products any cheaper; and if all owners made gifts to all tenants, there is no reason to think that the tenants would voluntarily reduce prices or that the market conditions would be so changed as to compel them to reduce prices.

Quite a different question, however, is, Would prices be the same if conditions were such that land yielded no rent? If there were so much land of the best grade as to enable the community to supply its needs without making use of second-grade or third-grade land, obviously the conditions of production would be more favorable than when it is compelled to make use of poorer grades. A given quantity of labor and capital when applied to land of the best grade will produce more than when it is divided among the second, third, and fourth grades. Products would then be more abundant and the price of farm products in terms of other goods would probably be lower.

CHAPTER XXXVIII

THE DESIRABILITY OF CAPITAL AND ITS RELATION TO INTEREST

What is interest? One of the most difficult and elusive of all problems in economics is that of the interest of capital. Interest may be defined as the income which goes to the owner of capital, whether he uses it in his own business or lends it to somebody else. This income may take any one of several forms. The most common and clearly understood form occurs where a definite sum of value, represented usually by money, is lent by the owner to someone else. The borrower, in return for the loan, eventually pays back not only the principal but a stated sum or percentage of the principal year by year. The transfer of purchasing power from the lender to the borrower, however, does not necessarily take the form of money. It may be rather a claim upon some credit institution for money, as when the lender gives the borrower a check on a bank. The borrower then deposits this check in his own bank and proceeds to draw his own checks against this deposit. In a case of this kind no tangible money is personally transferred, and the borrower may not even see or handle any money. Nevertheless, there has been transferred to the borrower purchasing power in the form of a claim upon the bank for money. But the purpose of the borrower was not ultimately to secure money. Money is to him only a means of purchasing something which he really wants, and if he can make the purchase without actually handling the money—by handling credit instruments instead, or claims upon a bank for money—his purpose is answered just as well. Aristotle pointed out long ago that money serves merely as a claim upon society for a share of the general

fund of wealth in its possession. A credit instrument is only a more highly evolved claim of the same kind.

In the second place, the capitalist may transfer to the borrower not purchasing power but the material goods which the borrower desires and which he would buy if he were given the purchasing power; that is, the capitalist may transfer to the borrower specific pieces of capital, such as buildings and machinery, allowing the borrower the use of these pieces of capital for a definite period of time. At the end of the time they are of course to be returned to the lender. Meanwhile a definite sum is to be paid at stated periods for their use. This sum is in popular language frequently called rent rather than interest. The chief reason for calling it rent is that the sum which is paid in the form of money for the use of a group of material objects cannot be called a percentage of those objects, at least not until they are evaluated and their quantities stated in terms of value. Suppose that the agreement was to pay five thousand dollars a year for a certain group of buildings and a mass of tools and equipment. The five thousand dollars a year is not a percentage of the group of buildings. If, however, the buildings are appraised and their value is stated as one hundred thousand dollars, then it is possible to reduce the annual payment for their use to a percentage basis. It might then be said that the borrower was paying 5 per cent on the sum borrowed. Unless the transaction takes this form it is more convenient to say that he is paying five thousand dollars rent than that he is paying 5 per cent interest. The chief reason for calling it interest is that economists have formed the habit (and there are reasons for this habit) of speaking of rent as that which is paid for the use of land, and of interest as that which is paid for the use of capital. Since the buildings and the equipment are capital rather than land, that which is paid for their use would have to be called interest, unless we change the definition of interest.

Distinction between rent and interest. There seem to be some very important reasons for distinguishing between rent and in-

terest in this way. Land is a natural resource; it is not the product of human foresight or of human industry. Buildings, tools, equipment, etc. are the products of foresight, enterprise, and industry. That which the landowner receives as rent for his land he receives because he has come into the possession of a natural agent which neither he nor anyone else produced; that which the owner receives for the use of buildings, tools, and equipment he receives for something which he either produced or paid someone else for producing. There seems, therefore, to be a wider difference between that which is paid for the use of buildings, tools, and equipment and that which is paid for the use of land than there is between that which is paid for borrowed money and that which is paid for buildings, tools, and equipment. In this discussion, therefore, we shall adhere to the distinction between rent and interest which nearly all standard books on economics have followed.

Distinction between interest and profits. The income of the capitalist may be secured from the use of capital in his own business. This, however, is sometimes difficult to distinguish from profits. Economists generally distinguish between interest and profits in this way: the business man who has his own capital invested in his business is allowed the current rate of interest on that investment; if he labors or puts in his time supervising the business, he is also allowed a salary or wages of superintendence; if he has anything left over after allowing himself interest and wages, this surplus is called profit or profits. If he has not been particularly successful the profits may be negative; in other words, he may incur a loss. That means that his total income may not be as great as it would have been if he had gone out of business, lent his capital at interest, and hired himself out at a salary as a superintendent.

Interest, therefore, as it is generally defined, includes, first, that which the owner receives for the use of a fund of purchasing power which he transfers to a borrower; second, that which he receives for the use of a mass of material goods—buildings, tools, equipment, etc.—which he permits the borrower to use

for a stated period; and, third, that which he receives in return for the capital which he owns and which he uses or has invested in his own business. Care must be taken, in considering these various forms of interest, not to include too much. That which the lender of a fund of purchasing power receives in excess of the amount necessary to preserve the fund intact is interest, and that alone. If any insurance is involved, this must be deducted from the total amount received. Some very hazardous investments appear to pay very high rates of interest. This may be called gross interest, only a part of it being net interest, the remainder being payments for risk and akin to profits rather than interest. Again, when equipment itself is lent, rather than a fund of purchasing power, allowance must be made for deterioration. Unless the capitalist maintains the quantity of his capital intact and receives a surplus in addition to this he has not received interest. It might easily happen that a part of the five thousand dollars received for the buildings, tools, and equipment in the above illustration was necessary to keep the buildings in repair and to recoup the owner for the necessary deterioration. In short, interest is the amount which the owner of capital receives over and above the sum necessary to maintain the original quantity of his capital.

Why is interest paid? The problem of interest thus defined divides itself into two parts: first, why is interest paid? second, what determines the rate of interest? One answer to the first question is that capital is productive. This could apply only to what we have defined as productive as opposed to acquisitive capital. That any kind of capital is productive has sometimes been called in question. Something depends upon the meaning of the word "productive." No one has challenged the proposition that tools are useful. Those who assert that capital is productive mean absolutely nothing more than this. Those who deny the productivity of capital invariably have some other definition of the word "productive" in mind, and there is not much to be gained by quibbling over the use of words.

If tools are useful it is pertinent to ask for what they are useful. They are useful for production, not for consumption. With an adequate equipment of tools one can produce more than with an inadequate equipment. The formula "More and better tools, more production; fewer tools or poorer tools, less production" supplies the farmer and the business man with as good a theory of economic causation as any logician has ever been able to invent. If I am a farmer and perceive that with an additional horse I can grow a larger crop than if I did not have that additional horse, I am not likely to puzzle my head very much over abstruse questions of economic causation. The fact that a larger crop will result from my using another horse is a sufficient reason why I should try to come into possession of that horse.

Marginal productivity of capital. It is true, as has been pointed out and argued ad nauseam, that if I did not have any plows or tools to use with the horse he would be of no use, or that if I did not have any labor to direct him he would not produce anything. This line of argument, instead of proving that the horse is not productive, merely proves that other forms of capital, as well as labor, are also productive. In any given situation, with any given type of equipment, find out how much you can produce without any particular unit,—say the horse in question,—and then how much you can produce with it, and you have a measure of the productivity of that unit in that situation. At any rate, it is a fair test as to how much that unit would be worth when added to the rest of the equipment. If there is another farmer whose equipment calls for an extra horse, and if an extra horse will add more to the product on his farm than on mine, the other farmer will bid against me for the horse, and under the circumstances can afford to pay more for it than I. If he hasn't the money with which to purchase it he can afford to pay a little more for the use of the money than I can afford to pay. Apply this test to each and every kind of capital required, not only on farms but in shops and factories, railroads, stores, etc., and we get an idea of the test of the usefulness, or

productivity, of capital. It might very well be, however, that on another farm, where there was a surplus of horses, the farmer in charge would find that one more horse would add little or nothing to his crop. Having a surplus of horses, what he would need more than an extra horse would be some extra plows and harrows, or plows and harrows of a larger size, to balance his equipment. If he understands the situation he will see that it is to his advantage to sell some of his horses or else to buy other equipment. This balancing of the equipment of industries goes on all through society and is one of the fundamental problems of business management.[1]

Here we must repeat a caution which was given in the discussion of value. We are not to discuss the productiveness of labor in general or of capital in general, any more than we are to discuss, under the problem of value, the utility of bread in general, meat in general, or water in general. We are always concerned with definite units which may be added to or subtracted from the existing supply. Therefore we are not concerned with the productiveness of horses in general, cows in general, or even capital in general, but with the need for definite units of capital, such as one horse more or less, one cow more or less on a given farm, one boiler more or less in a real factory, and so on through the whole range of industry. Wherever any producer finds that he could use more capital of any form advantageously, he has a perfectly good reason for trying to get an additional unit of that particular kind of capital. Whether we call it the productivity of the unit of capital, or merely its usefulness, does not matter.

The opposite method of reasoning is involved in the statement that if there were no labor, capital could not produce anything. This is dealing with labor in general and capital in general. It is likewise true, of course, that if there were not any capital, labor would not be able to produce very much during the next month or the next year,—not, in fact, until it had equipped itself with a new supply of tools. It might very

[1] Compare, also, Chapters XVII and XXXIII.

well happen that in any definite community, like the overcrowded section of a great city, there would be more unskilled labor than could possibly be used at that particular place. The formula "More of this particular kind of labor, more product" would not apply. When we speak, therefore, of the productivity of capital, we do not mean that capital is productive under all possible circumstances, regardless of the surroundings. Neither is labor productive in that sense; it has to be located where there is at least land available, and in order that it may be very productive it must have an adequate supply of tools. In short, nothing is productive when it stands alone, unrelated to many other things in the surrounding universe. Labor, of course, is a more fundamental and primary agent of production than capital, since capital is itself the result of labor, thrift, and enterprise. But we are not, in a practical work on economics, dealing with an absolutely primitive economic situation; we are dealing rather with the conditions which we find all around us and with the specific needs of specific industries and specific communities.

What does capital include? As capital was defined in the chapter devoted to that subject, it includes something more than producers' goods. It includes consumers' goods which are lent, rented, or hired in order to secure income for their owner. In these cases the income of the capitalist is not due to the productivity of the consumers' goods thus lent; it is due rather to their usefulness in consumption. He who builds a dwelling house, or hires someone else to build it, and then rents it to an occupant is virtually selling the flow of utilities which the house furnishes to the occupant during a definite period of time. These utilities are in the form of comfort, convenience, luxury, and even style in some cases; but the problem of interest is much the same, in the last analysis, whether the capital be productive or acquisitive.

Capital itself, not its value, is productive. Those who deny the productivity of capital generally have a special definition of capital. Instead of thinking of productive agents they are usu-

ally thinking of a sum of value. They do not necessarily mean money, but a fund of value which is embodied in capital goods. Of course the value of capital goods does not produce anything. The value of the horse does not cause him to do good farm work; it is the fact that he does good farm work which causes him to have value. If, instead of thinking of the farmer's capital as horses, cows, and other equipment, we think merely of the value which is embodied in them, we may easily reach the conclusion that capital is not productive; but if, instead of thinking of the value which is embodied in them, we think of the objects themselves, we can hardly avoid the conclusion that they are the agents by which production is increased.

In order to bring the law of interest under the general law of value, let us recall the fact that things have value only when they are wanted by someone. This is as true of capital as of anything else. If we confine our attention to that portion of capital which consists of producers' goods, without considering the subject of consumers' goods which are used by their owners for the getting of an income, it is safe to say that the use of capital is desired only for the sake of what it will add to the productive power of the user. He does not want it for its own sake. If it added nothing to his productive power he would not want it and would not be willing to pay a price for the privilege of using it. Even the owner desires to own capital not because capital is itself capable of gratifying a desire directly but because it is capable of adding to his income. If it added nothing to his income (that is, if, as the result of using it in his business, he was merely able to get back the original cost, that is, the principal) he would have no motive for owning it or using it. The more it will add to the productivity of his business, the more he will desire the use of it.

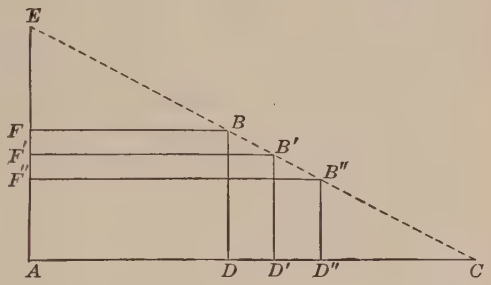
Why capital is wanted. The productivity of capital, or the advantage of having the use of it, is subject to the principle of marginal productivity, as is the productivity of labor and land. If you increase the number of instruments of a given kind in any industrial establishment, leaving everything else in the

establishment the same as before, you may within limits increase the total product of the establishment somewhat, but you will not increase the product in proportion to the increase in the number of instruments in question. If you increase all the instruments in a given industrial establishment without increasing the labor at the same time, each instrument will be used a little less intensively, or it will be idle a greater number of minutes per day, simply because of the scarcity of labor. On the other hand, of course, if you diminish the number of instruments or the total equipment, leaving the amount of labor the same, each instrument, or each unit of the equipment, will have to be used more intensively.

The productivity of capital decreases, other things being equal, as its quantity increases. Take a farm, for example. With a given labor force, the greater the number and variety of tools and implements, the less intensively each one is likely to be used; and the smaller the number, the more intensively each is likely to be used. There are many farms on which it is found that there are such a number and variety of tools and implements that the farmer is really not getting any interest on a large part of his investment. Some expensive tools are idle so much of the year that they do not pay for themselves; that is, the farmer never gets back the original price which he paid, to say nothing about getting interest on that price. On the other hand, there are other farms so poorly equipped that every tool in the farmer's equipment is used very intensively, and it would be money in his pocket to invest in additional equipment. For every dollar which he put into more and better tools he would get back not only the original cost price but something in addition which could be called interest on the investment.

That which is found to happen on farms is also found to happen in larger industrial establishments,—factories, railroads, etc. That which is true of an individual farm, shop, or other business establishment is also true of the community as a whole. If, for example, there are very few plows in a given community where there is an abundance of land, many laborers, and much

other capital besides plows, each and every plow would be a matter of considerable importance; it would be in general demand and would be used a great number of days in the year. Under these conditions you could say of that community, "One more plow, considerably more product; one less plow, considerably less product"; in short, the marginal productivity, in that particular community, of that form of capital called plows would be high. If, on the other hand, there were a great number and variety of plows in the community, other factors remaining the same, each one would be a matter of much less importance; each one would be idle a greater number of days in the year. Then you could say, "One more plow, comparatively little more product; one less plow, comparatively little less product"; in short, the marginal productivity of plows would be low.



Applying the same method of reasoning to other forms of capital or to all forms of capital, we reach the same conclusions. An abundance of all forms of capital, land and labor remaining the same, would give a low marginal productivity to capital; whereas a scarcity of all forms of capital, land and labor remaining the same, would give a high productivity to all forms of capital. This would show itself also in the case of liquid, or uninvested, capital. Where all forms of capital are scarce, one hundred dollars invested in tools would add considerably to the productivity of the community; but where all forms of capital are very abundant, then one hundred dollars invested in additional tools would be of comparatively little value.

The preceding diagram will serve as an illustration of this law and also as a means of introducing the next question to be considered in the general problem of interest.

Let the amount of capital in the industrial community be measured along the horizontal line AC; let the productivity of capital be measured along the perpendicular line AE; and let the descending line EC represent the rate of decrease in the marginal productivity of capital. If the amount of capital were measured by AD, the marginal productivity would be measured by the line BD, or AF. If the amount of capital were measured by AD', the marginal productivity would, other things remaining equal, be measured by the line $B'D'$, or AF'; and when the amount of capital equaled AD'', marginal productivity would equal $B''D''$, or AF''. From this it follows inevitably that if capital went on increasing to AC, the marginal productivity of capital would be destroyed altogether. That is to say, the supply of capital would have reached that limit where no more could be used to advantage, and some could be spared without loss.[1]

[1] T. N. Carver, The Distribution of Wealth, pp. 223–224. The Macmillan Company, New York.

CHAPTER XXXIX

THE COST OF CAPITAL AND ITS RELATION TO INTEREST

Why capital is scarce. Seeing that the marginal productivity of capital, or the advantageous use of its marginal increment, diminishes as the supply of capital increases relatively to other factors, it is quite important that we should be able to account for the supply of capital as well as for its demand. Its demand, as has already been suggested, is based upon its desirability in production or in consumption; that is, upon its productivity or the opportunity for its advantageous use. Unless, therefore, the supply were in some way limited, productive capital might become so abundant as to leave it with no marginal productivity at all. We found, when we were discussing the value of commodities, that the cost of producing them operated as a check on production and kept the supply within such limits as would give them a price approximately sufficient to pay the cost of production. Some factor must be found which limits the supply of capital as cost of production limits the supply of an ordinary commodity.

The irksomeness of waiting. There are two factors which are obviously at work: one is the mere cost of producing the capital goods; the other is the cost of waiting, or the disinclination which many individuals feel toward waiting. The cost of producing tools needs very little discussion. Unless the farmer's plow will return him, before it is worn out, enough to replace the price which he originally paid for it, he will of course have no motive for paying that price. If plows should become so numerous on a given farm that the farmer felt that he would probably never get back enough from a new plow, added to those already in use, to repay the price of that plow, it would

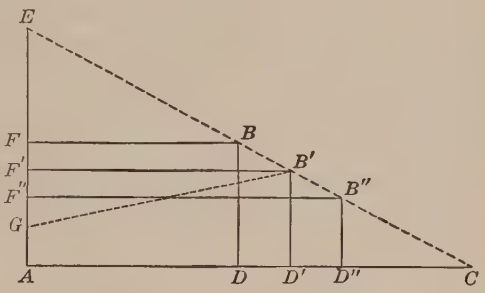
be foolish for him to buy it. If every farmer behaves in this way, certainly no more plows will be bought than can be used with that degree of advantage. If he has to pay fifty dollars for a new riding plow, and if he figures that in the course of its lifetime it will add only fifty dollars to his product over and above what he could produce with his existing equipment, then he would of course gain nothing from its purchase; he would merely get back the original purchase price. If the average farmer had no disinclination toward waiting it is probable that farmers would buy so many plows as to reduce the marginal productivity of plows to the level of the cost; that is, to the level of the purchase price.

But suppose that the plow which cost fifty dollars will return the farmer only five dollars a year and will last ten years; it then just replaces its original cost; the farmer will have got back at the end of ten years the money which he put into it, and no more. Meanwhile he has had to wait ten years. If he does not mind waiting,—if waiting is not in the slightest degree irksome to him,—he will probably be willing to buy a plow under such circumstances, though there will be neither loss nor gain. If, however, he does not like to wait,—if he prefers present enjoyment to future enjoyment,—then he will hold on to his fifty dollars in the first place rather than spend it for something which will return fifty dollars in ten years' time. Under these circumstances he will certainly not buy the plow unless he has so few plows as to give a higher marginal productivity than that which we have been discussing. If he has so few plows that the possession of an additional plow will in the course of ten years add one hundred dollars to his income, he will add fifty dollars to his wealth during the ten-year period,—that is to say, fifty dollars will go to replace the purchase price of the plow; the other fifty dollars is surplus. This and this alone is interest, and a rather high rate of interest; namely, 10 per cent per annum. But if every farmer is likewise disinclined to wait, the market for plows will be limited. Only as many will be purchased as will yield a return large enough to more

than pay the purchase price. In other words, farmers in general will get some interest on that which they invest in plows.

This may be illustrated by the following diagram.

Let us suppose, as in the former diagram, that the number of implements of a certain kind, say plows, is measured along the line *AC*, and their marginal productivity along the line *AE*. In this case, however, we mean their total marginal product during their average lifetime, or that amount which an average plow will add to the product of the community during its lifetime, over and above what could be produced without it. To distinguish this from the marginal product per year we shall call it the total earnings of a plow. Letting the descending line represent the decline in the total earnings of each plow as the number of plows increases, the line *DB*, or *AF*, would represent the total earnings of each plow when their number was represented by the line *AD*. When their number is *AD'* the total earnings of each would be *D'B'*, or *AF'*; and when the number is *AD''* the total earnings of each would be *D''B''*, or *AF''*. Let us further suppose that the cost of making plows is represented by the perpendicular distance of the various points on the ascending line *GB'* above the base line *AC*. If this cost were the only check on the production of plows there is no reason why they should not increase to the point *D'*, where the total earnings of each plow would just pay the cost of making the most expensive plow of the total supply. They would sell at the uniform price of *D'B'*, or *AF'*, which would be their normal equilibrium price. The total earnings of a plow would then just cover the price which the buyer would have to give for it.[1]



Why the present value of a productive agent is less than the future value of all its products. Now as a matter of fact, people

[1] T. N. Carver, The Distribution of Wealth, pp. 226–227. The Macmillan Company, New York.

do not like to wait. Waiting is to some quite as irksome as working. It is also quite as necessary to efficient production. Anything, whether it be working, waiting, or risking, which is necessary to efficient production, and which at the same time is irksome, must be paid for. The fact that it is necessary for production furnishes a sufficient motive for paying for it; the fact that it is irksome makes it necessary to pay for it, because men will not otherwise perform this function. In order that there may be an adequate supply of tools, which is necessary for efficient production, there must be waiting. Labor must be performed in the making of the tools, and then somebody must wait until they have been used for a number of years in order to get back from their use the equivalent of that which was originally expended in making them. If the laborers who make the tools are not themselves willing to wait, they may sell them to someone else, who then undertakes to wait for their products to mature. If both the laborers who make the tools and the one who purchases them are disinclined to wait, their market price will have to be something less than the sum of their future earnings. The laborers, being disinclined to wait, will be willing to sell for a cash price somewhat lower than the total sum of future earnings, and the purchaser will not be willing to pay a price which would equal the sum total of the future earnings. In the price-making process, therefore, the capital goods must necessarily sell for less than the sum of the future earnings. The buyer who holds them during their lifetime finds himself in possession of a surplus, which is his compensation for waiting.

Take the case of a blacksmith who, by his own labor, makes a plow out of materials which cost him five dollars. Let us suppose that he can in a fortnight make a plow which will earn a total of thirty dollars during its lifetime of ten years. Deducting the cost of materials, this leaves him twenty-five as the net earnings of his fortnight's work; but he must wait for his wages, receiving them in installments over a period of ten years. If he does not mind waiting this will be no drawback, and he would just as lief make a plow as work for the same amount in cash or in present consumable goods.

Or, having made such a plow, he would not sell it for less than thirty dollars, the total amount which it will be expected to earn during its lifetime.

But if he does mind waiting and would much prefer to receive his wages at once, he would not make plows at all so long as he could earn twenty-five dollars per fortnight in present consumable goods. Or, having made a plow which will earn thirty dollars in the course of its lifetime, he would be willing to sell it for less than that amount, which, counting out the cost of the raw materials, would net him less than twenty-five dollars for his work. If no blacksmith could be found willing either to wait ten years for his wages or to accept less than twenty-five dollars for the amount of work necessary to make a plow, no plows with such small earning capacity would be made unless someone else could be found who did not mind waiting and who would therefore be willing to pay thirty dollars for a plow and then wait ten years to get his money back. But if no such person could be found, the making of plows would stop until their growing scarcity raised their marginal productivity and their total earnings somewhat above thirty dollars.[1]

Though it is not likely that anyone would be willing to wait ten years to get his money back, one might be willing to wait if he could get back not only the original sum of money but a surplus besides. The farmer, for example, might be willing to pay thirty dollars for a plow which would in the course of ten years earn him fifty dollars. The twenty dollars surplus would be interest. The problem, as it presents itself to the farmer who is contemplating investing money in a plow, is very much the same as that which presents itself to a lender who is contemplating lending money to someone else. As a rule he prefers to keep his money rather than lend it, unless he can get a surplus by lending it. Every form of investment involves the same problem. The investor is compelled to give up something in the present (that is, either money or the opportunity to spend money for present goods) in order that he may have the means of securing the money or goods at some time in the future. The

[1] T. N. Carver, The Distribution of Wealth, pp. 229–230. The Macmillan Company, New York.

disinclination which is generally felt toward waiting is such that men will not, as a rule, invest and wait unless there is a chance to get a surplus. The surplus is then in a sense the reward for waiting.

It is not to be assumed that there is anything inherently meritorious in waiting merely for the sake of waiting. The only merit there is in the process is in the increased production which comes through the use of effective tools and equipment. Since, furthermore, one cannot provide oneself with effective tools and equipment without waiting or inducing somebody else to wait, we have a sufficient reason why waiting should be paid for when it results in increased production. If it does not normally result in increased production, there is no reason for waiting and therefore no reason why it should be paid for.

Not all waiting is irksome. While it is true that, as a general rule, men are disinclined toward waiting (that is, they prefer present to future goods), still there is a certain amount of waiting which takes places normally without any great amount of sacrifice and which therefore does not need to be paid for. There would be some saving even if no interest could be secured on savings. In fact, it is probable that a considerable amount of saving would take place even if men were compelled to hire vaults or storage places in which to keep their savings. In this case savings could be said to yield negative interest rather than positive interest.

In so far as it is true that men estimate present consumption higher than future consumption, it applies only to the consumption of corresponding or similar increments of income. A man with a large income may be said to derive less utility from the last dollar of his income than from the others; or, to put it in another form, he can lose one dollar of his income with comparatively little feeling of loss or sacrifice; but if, with the same general scale of wants, his income were much smaller, then the loss of a dollar would be more keenly felt. If his income is very large, he may find it difficult to spend it all on present consump-

tion. In this case it may be easier to save it than not to save it. To invest a little of one's large income, may, therefore, involve no cost or sacrifice whatsoever.

On the other hand, anyone who is gifted with a moderate degree of foresight will look ahead and consider the possibilities of future emergencies. He may therefore lay up for a rainy day, for sickness, or for old age, even though there is no possibility whatever of securing interest on his savings. If one who has a large present income foresees the possibility that at some future time his income may be cut off, he may reason somewhat as follows: "I can spare the few unimportant luxuries which the last hundred dollars of my income will buy, without any appreciable sacrifice. At some future time this hundred dollars may supply my most pressing needs, if I should find myself some day without an income. Therefore it will be very much better if I save this hundred dollars and lay it up against that day than if I consume it now." Another person, with a smaller income, would reason in the same way, though the sum which he would lay by would be smaller. And a person with a larger income would likewise reason in the same way, though the sum which he would lay by would be larger. Taking the whole community, especially if it contains a great many well-to-do people, a considerable mass of wealth would be saved for this reason alone. This kind of saving may be said, therefore, to involve no cost; and yet those who save in this way are able to secure interest on their savings, along with those who save at considerable sacrifice.

Some capital accumulated without expectation of interest. If those sums which are saved in this way without sacrifice were sufficient to meet the demands of all communities for capital, such a thing as interest would not exist; that is to say, if so much were saved in this way, and there were so few opportunities for using capital as to reduce the marginal productivity of capital to the minimum point, capital would practically be a drug on the market. If, however, the opportunities for the

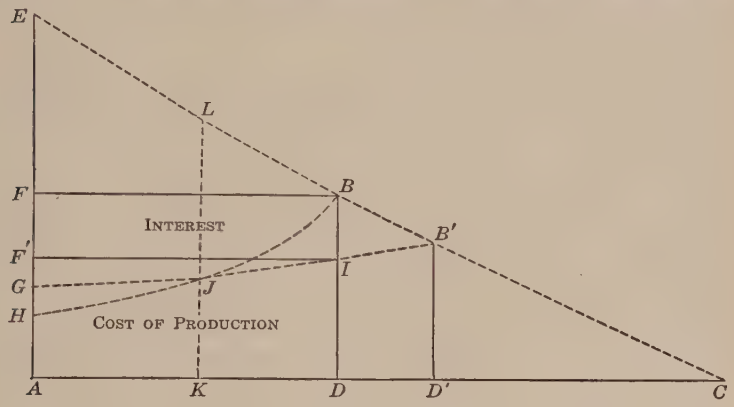
productive use of capital are so great that more capital is demanded than can be saved without cost, then, in order to induce further saving, a surplus must be paid for its use.

Interest a part of the general law of value and price. The price which is paid for the use of capital comes under the same law as the price which is paid for anything else. In the chapter on Scarcity it was pointed out that some goods are produced, under certain circumstances, practically without cost. Trout, where the fishing is good, are caught for the pleasure of the sport. If the number of trout that can be caught for pleasure is sufficient to satiate the desire for trout, then trout commands no price; if this quantity is not sufficient to satiate the desire, and consumers are demanding more, then they must begin to pay a price to induce other fishermen to undertake the work of providing an adequate supply. The law here is the same as that which controls capital. Some capital will be accumulated without cost. There is probably no community in existence, however, in which enough capital to supply all demands is provided in this way. It is therefore necessary for all who need it to offer a price in order to induce a larger volume of saving than would take place if no interest were paid; that is, no price for the use of capital.

The cost of saving is, like other forms of cost, ultimately a matter of psychology. Among people who are gifted with a large degree of forethought, saving is less irksome than it is among people who live mainly in the present. Among people of the latter class very little saving will take place unless there is a distinct reward for it. Among people of the former class a great deal of saving would take place even if there were no reward. A community with little forethought is therefore always one in which interest rates are high, because there are small accumulations of capital and, the supply being small, there is great need for more. It is the need for more of a thing which induces people to pay a price for it.

The functional theory of interest. This theory of interest may be called a functional theory of interest, to correspond with the

functional theory of value and the functional theory of wages, which have already been outlined. The function of a high price, as has been pointed out, is to call forth a larger supply; the function of high wages is to stimulate a larger supply of the labor which receives high wages; and the function of a high rate of interest is to call forth a larger supply of capital for which interest is paid. A community that needs more capital can get it only by inducing larger savings. These larger savings may



be secured either by compulsion (that is, by taking a part of the social income by authority and setting it aside) or by attraction (that is, by offering a reward for saving). There is no other possible way that has ever been suggested, even on paper, for accomplishing this necessary result.

Let us assume that the amount of a certain kind of capital is measured along the line *AC*, and its marginal productivity along the line *AE*, the descending curve *EC* representing the decline in the marginal productivity as the supply increases. If there were nothing to check its production but the cost of producing it, the supply would normally increase to the point *D'*, where the marginal product would just cover the marginal cost, and there would be no interest. This point is located by the intersection of the cost curve *GB'* with the productivity curve *EC*. But in addition to the cost of production there is the disadvantage or sacrifice of waiting. The effect of this

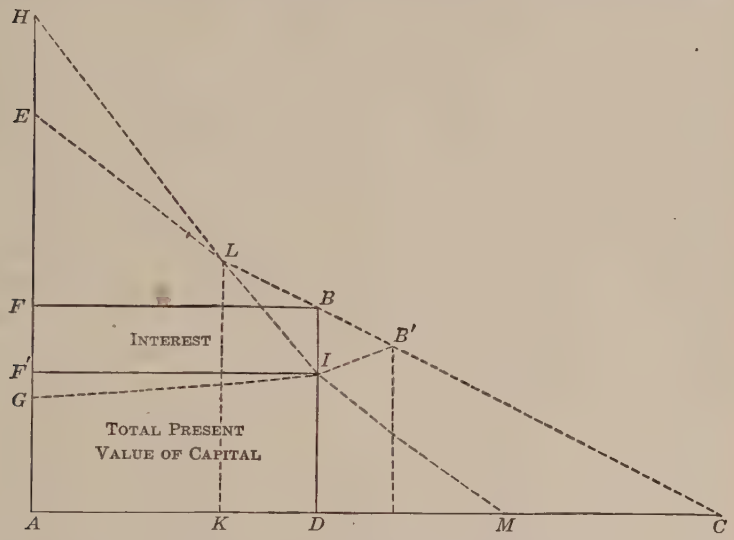
is illustrated by the rising curve *HB*. This curve represents, by its distance above or below the cost curve *GB*, the positive or negative sacrifice of saving the different parts of the supply of capital. Where this curve is below the cost curve it means that there is an advantage rather than a disadvantage connected with the exchange of present for future goods which saving implies; where this curve coincides with the cost curve there is neither advantage nor disadvantage connected with saving; but when it rises above the cost curve there is a disadvantage connected with saving which becomes a check upon the production of capital in addition to that effected by the cost of producing it.

If the production of capital should stop at the point *K*, where, as shown by the intersection of the abstinence curve *HB* with the cost curve *GB'*, there is neither advantage nor disadvantage connected with saving, its marginal productivity would be represented by the line *KL*. This would give its owner an advantage far in excess of any disadvantage connected with its production, and this would stimulate its further production. But in order to increase its production it would be necessary to do more waiting as well as more work. From this point on, further waiting begins to be burdensome, acting as a positive check upon production. The normal tendency would be for capital to increase up to the point *D*, where the combined disadvantage of working and waiting, or of cost of production and abstinence, would be just compensated by the marginal productivity of that kind of capital. At this point the marginal productivity would be represented by the line *DB*, the marginal cost of production by the line *DI*, and the marginal abstinence by the line *IB*. The total present value of that kind of capital would then be represented by the parallelogram *ADIF'*. The total product of the present supply of capital during its lifetime would be represented by the parallelogram *ADBF*, and the total surplus, or interest, by the parallelogram *F'IBF*.

THE PURCHASER'S DEMAND FOR AGENTS OF PRODUCTION

The same result is reached by approaching the subject from the side of demand, and regarding the disadvantage of waiting as reducing the purchaser's demand (as distinguished from the borrower's demand) for capital instead of checking its supply. It is, generally speaking, the amount which purchasers will pay for it which consti-

tutes the reward of the makers of capital and serves as an inducement to continue the work of production. So long as the purchaser's demand will give plows, for example, a price equal to the cost of producing them, the producers will continue their work. As already pointed out, if there were no disadvantage connected with saving, men might be expected to pay as much in cash for a piece of capital as they expect it to return them in the way of income during its lifetime. In that case the purchaser's demand curve for capital would



coincide with the productivity curve of the foregoing diagram. There would then be an equilibrium of supply and demand at the point where the demand-productivity curve *EC* intersects the cost curve *GB'*. But since there is a certain disadvantage connected with saving, and men are not always willing—not even those who inveigh against interest on capital—to pay as much in cash or present consumable goods for a piece of capital as it will produce during its lifetime, the purchaser's demand curve does not coincide with the productivity curve, and the equilibrium of demand and supply is reached at some other point.

This way of approaching the problem may be illustrated by means of the above diagram, which is a modification of that on page 545. The purchaser's demand for capital is, in this case, represented

by the descending curve *HM*, which bears the same relation to the productivity curve *EC* as the abstinence curve *HB* bore to the cost curve *GB'* in the last diagram. Where this demand curve is above the productivity curve it means that men are so anxious to provide against the uncertainties of the future that they will give a larger number of present goods for the sake of having a smaller number at some time in the future, or that men of enormously large incomes would have so much trouble trying to consume them all that they would rather invest a part in some enterprise for the sport of carrying it through, even though they may never get all their money back, while men of moderate incomes would rather provide against a rainy day than to consume all their incomes, even though their savings shrink in the interval. Yet if the enterprises return a surplus, and the savings expand, both classes of savers will take advantage of the possibility of getting an increase. Where the demand curve coincides with the productivity curve, it means that there is neither advantage nor disadvantage connected with saving; and where the demand curve falls below the productivity curve, it means that there is a disadvantage connected with saving, and therefore less will be paid for a piece of capital than it will earn in the future.

Under these conditions the equilibrium of demand and supply, which determines the present selling value of agents of production, would be reached when the supply of capital was represented by the line *AD*, for this would be the point where the purchaser's demand for the different forms of capital would give them a value just equal to their marginal cost of production. Yet the marginal productivity of that amount of capital would be represented by the line *DB*; the present selling value of capital, which is equivalent to the present value of its future product, would be represented by the line *DI*; and the surplus which would come to the buyer who took it at its present selling value and waited for its earnings to mature would be represented by the line *IB*. The total present value of all now-existing capital would be represented by the parallelogram *ADF'I*; its total future earnings, computed on the basis of its marginal productivity, by the parallelogram *ADFB*; and the total interest or surplus which would come to those who buy the capital at its present value and wait for its product to mature would be represented by the parallelogram *F'IFB*. The annual interest would have to be computed by dividing this gross amount by the average lifetime of the now-existing

capital. This would give the lump sum going as interest to the owners of capital each year. The annual *rate* of interest would have to be computed by finding what percentage the annual interest is of the total present value of the capital.[1]

The foregoing theory of interest,[2] though based largely on the marginal-utility theories of value and price as worked out by such writers as Jevons, Marshall, Böhm-Bawerk, and others, yet lays rather more emphasis on automatic or costless saving than those writers had done. It has led some later writers to the rather hasty conclusion that since a great deal of the capital actually saved is saved without cost, therefore interest could practically be abolished or taxed away without greatly reducing the amount of saving or the supply of capital.[3] Such a conclusion is of doubtful validity. In the first place, there is not a great deal of automatic or costless saving except among people who have already developed great economic foresight and acquired more or less fixed habits of thrift. Only they save automatically. Had it not been for the observed advantages to be gained through these habits it is doubtful whether they could ever have reached a high development among any people. One of the several advantages of thrift would be destroyed if interest were taxed away. If, after generations of experience, habits of thrift are once developed, the mere momentum of those previously acquired habits might conceivably carry on the work of saving, for a time at least, in spite of this diminution in the total advantage of saving; but it would be difficult to develop these habits still further, and it is doubtful if they could be maintained indefinitely even at their present level if one of the inducements were removed. Again, if interest were destroyed

[1] T. N. Carver, The Distribution of Wealth, pp. 242–249. The Macmillan Company, New York.

[2] It was set forth in a paper read before the Economic Seminar of Johns Hopkins University in January, 1893, and published in the *Quarterly Journal of Economics* for October of that year. Professor Commons had arrived independently at the same conclusion at about the same time.

[3] Cf. Cassel, The Nature and Necessity of Interest, especially A. B. Wolfe, Savers' Surplus and the Interest Rate, *Quarterly Journal of Economics* (November, 1920), Vol. XXXV, No. 1.

or taxed away it would reduce the incomes of those who had shown the propensity to save, either automatically or for the deliberate purpose of getting interest. They would therefore have less from which to save. Granting that others would find their incomes correspondingly increased, still, these would necessarily be the ones who had not previously saved much capital, and the probabilities are against the assumption that they will now save enough to compensate for the diminution in the amount saved by the previous savers.

Another error or oversight of those who argue that interest might be destroyed or taxed away without greatly reducing the total saving is the assumption that only a few marginal savers would be affected, or that the great mass of savers are not marginal savers and would not be affected by such a policy. As a matter of fact, every saver is probably a marginal saver to some extent; that is, every saver is probably induced to save a little more when interest is possible than he would be induced to save if he were not permitted to receive interest. Marginal saving takes place, therefore, along an extended line and not simply upon a single point on that line. If practically every saver in a vast number were to save only a little less when the inducement of interest is removed, there would be a considerable reduction in the total saving.

CHAPTER XL

PROFITS

What are profits? Profits may be broadly defined as the income of the independent business man who receives neither stipulated wages, rent, nor interest. In a somewhat narrower sense they include whatever he has left over after he has allowed himself interest on his own capital, rent for his own land, and wages for his own labor. This would seem to narrow the meaning of profits down to the reward for taking risk, though risk must be defined rather broadly. The enterpriser, as the independent business man may with fair accuracy be called, is essentially the man who undertakes something and relieves others of a part at least of the risk which they would otherwise have to take.

It would be quite possible, for example, for a group of laboring men to borrow capital, build their own factory, and run it. But if they did so they would always be in danger of losing not only what they themselves had invested but even their wages for a time; that is to say, if there should come a bad season, when the demand for products fell off, they might have to work for very low wages or for none at all. If some individual or group of individuals will undertake to run the business for them and guarantee them a certain fixed rate of wages, they are relieved of a part of that risk.

Profits as payment for insurance. Again, the men who furnish the capital may jointly assume all the risks of the enterprise. They may, however, be in part relieved by having one individual or group of individuals undertake the business and guarantee them interest on their capital. In such a case, however, the enterprisers usually have to invest some of their own capital. In such cases they, the enterprisers, put their own

capital in the most hazardous position. This is virtually the distinction between common stock and preferred stock in a corporation. Those who own the common stock take the greater risk. So long as the enterprise is running at all, the owners of the preferred stock must get their interest, whether the owners of the common stock get anything or not; but if the enterprise is very successful, the owners of the common stock get larger returns than the owners of the preferred stock. These larger returns over and above the rate of interest will be called profits.

The lure of an enterprise. In a smaller business, run, let us say, by an individual rather than by a corporation, the individual may borrow a part of his capital, and in this case, so long as he is in business at all, he must pay interest on what he borrows, whether he has anything left for himself or not. In case the business succeeds very well he gets a surplus which may be called profit. The lender of borrowed capital gets no more than the stipulated rate of interest. It is the function of the independent business man or the enterpriser to insure the other participants in the industry against at least a part of their risk. He cannot, of course, relieve them of all risks. Any income which the insurer gets over and above the normal rate of interest on the capital which he himself puts in may be called profit. This is the lure which induces men to undertake risks of this kind.

This suggests a functional theory of profits which fits in with the functional theories of value, wages, and interest already described in the previous chapters. The function of high profits is to induce a larger number of men to undertake independent enterprises. Where a larger number of such enterprises are needed, there are only two ways of getting them started. One is for the community as a whole to take a part of the social income and by authority invest it in new enterprises; the other is to offer a special inducement to private individuals to undertake the new enterprises voluntarily. This is usually done by

the offer, on the open market, of high prices for the products of the enterprise.

Necessity of taking risk. Risk-taking is no more meritorious in itself than is waiting or working. It is meritorious only when it results in increased production and well-being. Still, the well-being of society or the increased production of the goods which society needs makes it absolutely necessary that some risks should be taken. Risk is therefore something which cannot be avoided. These risks are of many kinds and degrees. The tastes of the people may change so that the product of a contemplated enterprise may be no longer desired. Some new invention may render obsolete the processes used and the machinery which has been installed. Strikes, insurrections, wars, and unforeseen physical calamities, such as fires, storms, and earthquakes, must also be taken into account. It would be very difficult to imagine any productive undertaking that did not involve risk. In the case of the farmer bad weather, insect pests, and diseases of all kinds threaten to decrease or destroy his income. Risk-taking is therefore as necessary as working or waiting in order to get effective production under way.

Irksomeness of risk. Unless, however, risk-taking were in some way irksome or disagreeable, it would not deter men from entering business, and there would be nothing here that would have to be paid for. That is to say, if people did not dislike to take risks there would be no hesitancy in entering a risky occupation. It would therefore not be necessary to offer a reward to induce men to enter it. In fact, so many would crowd into hazardous enterprises, and so increase the competition, as to leave no surplus for risk-takers as a class, the losses of some balancing the gains of the others. This is what actually happens in those fields, such as pure gambling, where men gamble for the excitement. But since risk-taking is sometimes irksome or disagreeable and since, in such cases, men would rather not hazard their accumulations and their present income, they must be paid something as a lure, or attraction to overcome this dis-

inclination. So few crowd into these enterprises as to leave for those who do make the venture comparatively little competition. This enlarges their opportunities for a profit and may leave the whole class with a surplus. The reason here is precisely the same as the reason for paying wages or interest or for paying the price of any commodity. The function of price, in a free country, is to overcome the disinclination to work, wait, or take risks. Risk is, in such cases, a part of the cost which the price must, in the long run, cover.

It has already been suggested that some risk is not burdensome and in many cases is actually exhilarating and attractive. The tendency to gamble is so strong in some people as to lead them to hazard not only wealth but even life and limb on dangerous enterprises. Different individuals, of course, differ in this respect, as they do in the inclination or the disinclination to work or to wait. There are also different kinds of hazards which appeal to different people. A study of lotteries shows that there is a greater propensity to hazard small sums, even on the remote chance of winning a large prize, than to hazard a large sum on the chance of winning a small prize, even when the chance is so large as to amount almost to a certainty. This might be tested by a laboratory experiment. The student is advised, however, not to try an actual experiment of this kind, because it is against the law; but it is not against the law to imagine such an experiment, and he is therefore recommended to try the experiment in imagination.

Let him, in imagination, offer for sale two kinds of lottery tickets, contained in boxes which we will designate as Box A and Box B. Let him put in Box A 2000 tickets, all of which are blanks but one. Let this one be good for $1000. In Box B let him put 2000 tickets, only one of which is a blank, all the rest being good for $1000 each. Let him experiment by trying to sell these two sets of tickets and see what price he can get for them. Now mathematically the tickets in Box A are worth 50 cents apiece; that is to say, one who bought them all at 50 cents apiece would neither gain nor lose. Those in Box B are mathematically

worth $999.50 each (that is to say, one who bought all the tickets at that price would neither gain nor lose), but the market price, or the price at which they will actually sell, would probably differ from the mathematical value. It is quite probable that the tickets in Box A would easily sell for more than 50 cents apiece, possibly a dollar apiece,—at least the experience with lotteries in the past, when they were legal, would lead one to believe this,—and yet every buyer would be paying twice as much as the tickets were worth. It is extremely improbable that the tickets in Box B would sell for anything approximating their mathematical value. It is doubtful whether they would sell for $900 each. If they did, each buyer would be getting his ticket for much less than it was mathematically worth. No lottery ever did or ever could afford to sell tickets like those in Box B.

Now occasionally there is a business risk that resembles somewhat the buying of one of the tickets in Box A. A great deal of gold-mining stock has been sold on the market under these conditions. The shares usually sell at a very low price, and there is a very remote chance of ever getting anything back; and yet once in a great while a large prize is drawn. It is the belief of careful observers that more money has been spent on the shares of gold-mining companies than all the gold mines have ever yielded. In other words, here is a field where there are literally no profits for investors as a class, the losses exceeding the gains. The reason seems to be the psychological one that this kind of risk is not irksome but is in itself attractive.

The ordinary conservative business risk, however, more nearly resembles the buying of a ticket from Box B. The shares of a conservatively managed corporation, for example, in a somewhat standardized business usually sell at a fairly high price. The prizes to be drawn or the profits to be made are usually small, though fairly safe, as compared with mining stock. There is very little in this that appeals to the gambling spirit. There is a certain irksomeness about it and a disinclination to this kind of risk-taking. The result is that such

shares generally sell for less than their mathematical value, so that investors as a class make somewhat more than they lose. There is, in other words, a real surplus here that may be called profits.

That part of a business man's income which comes to him because of his function as a risk-taker, or because he relieves certain others of a portion of the risk they would otherwise have to take, is somewhat analogous to the earnings of an insurance company. The only possibility by which an insurance company could earn anything is by collecting more from the people insured in the way of premiums than it pays to them for their losses. Of course if the insurance company receives more from the insured than it pays them in the form of indemnification for losses, they, in turn, must pay the insurance company more than they ever receive back for their losses. Why do they do this? In the main, because of the irksomeness of risk, they are willing to pay something more than they ever receive back, for the comfort of feeling safe. Similarly, the laboring man, whether he works for wages or a salary, is willing to give in the form of service a somewhat greater value than he ever receives, for the comfort of feeling safe. That is to say, a group of laborers who assumed their own risks by owning and operating their own factory might, in the course of many years, receive more on the average than they would receive if they worked for wages, but they would always be more or less anxious or worried about the condition of the market and the possibility of having to go some weeks or even months without any wages at all. This sort of worry would be so irksome that most of them would prefer to receive a little less and be certain of getting it than to have the prospect of receiving a little more in the long run without feeling the same degree of certainty. The employer who thus insures them may find himself with a surplus for much the same reason that an insurance company does. There is the same risk and presumably the same justification in one case as in the other.

Relation of risk to abstinence. There is a close parallelism between the part played by risk in the determination of profits, by abstinence in the determination of interest, and by cost production in the determination of the price of a reproducible commodity. It was pointed out in Chapter XXXIX, on The Cost of Capital and its Relation to Interest, that the necessity of waiting, combined with the fact that waiting beyond a certain point is disagreeable, tends to reduce the present price of a piece of capital to something less than the sum of its future earnings. The one who buys it at its present selling price and waits for its earnings to mature will normally and in the long run find himself in the possession of a surplus as the result of his waiting. Since men are generally disinclined to waiting, they never bid against one another for the possession of future goods vigorously enough to raise their present price to the level of the sum of their future earnings. The result of this is that the normal selling price of a piece of capital is low enough to allow its purchaser a surplus. In a similar way the risk connected with carrying on any enterprise, particularly a new enterprise in a changing society, may reduce the present value of the whole equipment somewhat below the probable value of its products even after allowance is made for interest. Because of the general disinclination to assume risks of the kind ordinarily met with in business, the competitive investments (that is, the competitive buying of productive goods and embarking on productive enterprises) are less intense than they would otherwise be. It is for this reason that those who undertake such enterprises may be expected, in the long run, to secure a profit over and above the interest on the capital which is invested.

It was also pointed out in Chapter XXXIX that not all waiting is irksome, and that some waiting is experienced without any hope or expectation of surplus income. The parallelism between risk and waiting may be carried a step farther. Not all risk is irksome. Some risks are undertaken for the sake of the

excitement. Boys sometimes like to skate over thin ice just because it is dangerous. Men sometimes like to gamble their money just because it is dangerous. All sorts of risks are taken for the sheer excitement of the hazard. When you find a business enterprise which appeals to the gambling instinct, men will be found so eager to buy or to invest in the risk as to give it a market value somewhat greater than its mathematical or economic value. Those who persist in buying such risks invariably lose in the long run, though they may now and then win on some individual venture.

Egotistic belief in luck. Adam Smith long ago pointed out that men are not only egotistical regarding their own abilities but are generally rather fond believers in their own luck. Even though they are convinced that mathematically the chances are against them, their egotism leads them to believe that their own luck may offset the effect of mathematics. Of all superstitions the belief in luck is one of the most widespread. It is this sort of superstitious egotism on which the professional gambler and the lottery flourish.

Relation of the market to the mathematical value of a risk. In the case, however, of an enterprise which does not appeal to the gambling instinct, men are generally so reluctant to invest that the market value of the risk is usually somewhat less than its mathematical value. Men who persist in buying such risks inevitably gain if they continue long enough and if they are not ruined by their early losses. In the class of risks which appeal to the gambling instinct, the more one invests the more nearly certain one is to lose. If one were to buy all the lottery tickets, one would be absolutely certain to lose, because the lottery sees to it that the total price of the tickets exceeds the total value of the prizes. In the other class of risks—namely, those which do not appeal to the gambling instinct—the market value is less than the mathematical value, as already stated. It follows from this that if one were to buy all such risks one would be absolutely certain to gain, for the sum total of the market values is less than the sum total of all the mathematical

or economic values. Those who invest in the gamblers' risk as a class lose rather than gain; those who invest in the ordinary business risks as a class gain rather than lose.

The question of the residual share. In view of all that has been said, it is safe to conclude that profits are made up of what is left after the other shares have been paid. This does not mean, however, that profits are a residual share. The term "residual share" has been discussed in a good many treatises on economics. By a residual share is meant the only share which is not determined independently. It has sometimes been argued, for example, that inasmuch as rent is determined by a law which works independently of other laws of distribution, since wages are determined by the standard of living which likewise is supposed to work independently of other laws of distribution, and since the rate of interest tends to work uniformly through the community, regardless of minor changes, profits are therefore undetermined by any law but are merely what is left over after the other shares are accounted for. It is quite as easy to show that any other share is a residual share in this sense as it is to show that profits are a residual share.

Many years ago Walker pointed out that profits are determined by a law similar to that of rent as applied to land. Profits, according to this law, are determined by the difference between the productivity of a given business man and that of the least efficient business man who could manage to stay in business. The latter was called the no-profit business man or entrepreneur, and he occupied a position analogous to the no-rent land on the margin of cultivation. A more efficient business man, however, could reduce the cost of production to a point somewhat lower than this no-profits man or else produce a better product, which would sell at a higher price. Herein lay his opportunity, and his only opportunity, for profits. Assuming that he paid the same rate of wages and interest and a rent which was proportional to the advantage of the site, his only chance of doing better than the other man was to organize these factors more effectively and to supervise them more dili-

gently by effecting economies which the other man was unable to effect. He would then find himself in the possession of a surplus. Beginning with profits and accounting for them by this differential law, Walker proceeded to show that rent and interest are also determined by definite laws. This left only wages to be accounted for. Therefore he assumed that wages are a residual share.

One may, however, prove by the same process that either rent or interest is a residual share. It all depends on which share you consider last in the series. The result of this, moreover, has resolved the whole doctrine of a residual share into an absurdity. Since the independent business man, or the entrepreneur, is the only one whose income is not the result of specific bargaining, and since he is the only one who does not sell his services for a definite price, he may be said to receive whatever is left over. The laboring man bargains for a definite rate of wages; and whether the business is making a profit or a loss he gets these wages as long as the contract stands. The capitalist lends his capital at a definite rate of interest and gets that rate of interest so long as the business keeps going, whether it is making a profit or a loss. Similarly with the landowner. But the entrepreneur is the only one whose income hinges on the question of profit or loss for the business as a whole.

The business man the chief bargainer. Every participant in a competitive enterprise is more or less a bargainer, but the independent business man is the chief bargainer of all. When the laboring man has bargained for a rate of wages, the rest of his work consists not in bargaining but in working; when the capitalist has bargained for a rate of interest, that is the end of his bargaining; and so with the landlord. But the independent business man is the bargainer per se; he bargains for everything—his raw materials, his help, his capital, his interest—and he also bargains with the purchasers of the product. He is the unbought buyer of everything and the unsold seller of everything connected with the business. It therefore happens that skill in bargaining is one of the greatest elements

in his success in securing profits. Bargaining, however, consists, in the first place, in investing, and the investment of capital is a very delicate operation. To invest successfully one must foresee the future needs of the community as expressed in the demands of the market. To err at this point is to fail.

Because of the disinclination of the average man toward taking the ordinary risk, the competition is somewhat intense for the safe positions of the laborer and the lender of capital. The intensity of this competition tends to keep their shares somewhat lower than they would otherwise be, but this disinclination makes the competition somewhat less intense among the business men who have to assume the chief risks. This, in turn, leaves them with somewhat larger incomes than they would get if the risks were less irksome and the competition more intense. The surplus income which comes to them in this way is called profits.

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PART VI. CONSUMPTION

CHAPTER XLI

MEANING AND IMPORTANCE OF CONSUMPTION

Two meanings of the word "consumption." There have been two meanings given by economists to the term "consumption of wealth." By one group it has been made to include any utilization of wealth in which the wealth is worn out, used up, or destroyed in the process; by another group it is defined as meaning only such utilization as gives direct satisfaction to a consumer. Under the first definition coal is consumed when it is burned to make steam for the running of machinery as well as when it is burned to supply warmth for the comfort of the human body; under the second definition only the latter use of coal would be called consumption. Those who hold to the first definition are compelled to divide consumption into two kinds; namely, productive consumption and unproductive consumption. It is always explained, however, that the term "unproductive consumption" does not mean useless or unnecessary consumption. It means that wealth thus consumed, in contradistinction to that which is productively consumed, is not used up in the process of producing other wealth. It is used rather for the final purpose for which all wealth is commonly supposed to be produced; namely, the direct satisfaction of human desires or needs.[1]

The tendency among recent writers is to use the term "consumption" in the narrower sense. By the consumption of wealth under this definition is meant the culmination of the whole economic process; namely, the satisfaction of human desires. Wealth which is worn out or used up in the process of production is not itself yielding satisfaction to consumers

[1] Compare the author's article on "Consumption" in the Encyclopædia Americana.

directly. It is yielding it indirectly, or helping to produce other things which will satisfy consumers directly.

The purpose of the user is the determining factor. Under modern conditions goods are used either for direct satisfaction or for the getting of an income. If they are being used for the getting of an income, they are not being consumed in the economic sense. The physician's automobile which is used in his profession is being worn out, but it is not being consumed in this sense. When the same automobile is used for his own enjoyment or that of his family, it is being consumed. Again, a thing may be in the process of consumption even though it is being used up very slowly. A diamond which is used as an article of pleasure or adornment is in the process of consumption, even though it may never be really worn out; but when it is a part of the stock of the jeweler, like the rest of his stock, it is being used for the purpose of getting an income. A substantial piece of furniture, when used for direct satisfaction, is being consumed; but while it is in a furniture store the immediate purpose of the owner is to gain a profit from it rather than to enjoy it, and therefore it is not yet in the process of consumption. In short, the consumer of an article is the one whose desires it satisfies directly. The article begins to be consumed whenever it begins to satisfy a consumer's desires directly; that is, when it has passed through all the channels of business and trade, where it is used for the purpose of getting an income, and comes into the possession of someone for whose satisfaction it is designed.

Importance of consumption. Most textbook writers on economics have regarded the consumption of wealth as a department of the subject coördinate with such departments as production, exchange, and distribution. None of them, however, has given as much space to it as to those other departments. The reason has apparently been the general opinion that consumption is essentially an individual matter with which the public has had little or no concern. Laws relating to consumption have been called sumptuary laws and have generally been condemned or

only half-heartedly approved. There is a growing opinion, however, that consumption is quite as important, from its effect on national prosperity, power, and greatness, as any department of economics. Even the regulation of consumption, as in the case of laws regulating or prohibiting the use of alcoholic beverages, is becoming popular. Probably no movement of recent years in America has been quite so popular or so democratic as the prohibition movement.

The importance of the consumption of wealth is further emphasized by the consideration that as many and as dire calamities have overtaken nations and peoples because of their irrational habits of consumption as because of inefficient systems of production, exchange, or distribution. In fact, consumption reacts powerfully upon all the other departments, particularly upon distribution. It was shown in the chapter on What determines the Rate of Wages that the standard of living of the laboring classes, which is a part of consumption, has much the same influence upon the price of their labor as that exercised by the cost of production upon the price of a material commodity. Again, the rate of the accumulation of capital, upon which so many things depend, is largely determined by the habits of consumption. The effect of luxury upon industry and general national strength is one of the largest of all questions. These illustrations are enough to show that the subject of consumption deserves the most careful study and the most serious treatment which economists can give it.

Ratio of consumption to production. In a profound illuminating article on War and Economics,[1] Dr. E. V. Robinson calls attention to the fact that in any country, when its production exceeds its consumption, the result is economic progress, but that when consumption exceeds production the result is economic retrogression. When production exceeds consumption, wealth is accumulating and taking on durable forms; when consumption exceeds production the national wealth shrinks, and the nation lives on its accumulated capital and, more-

[1] *Political Science Quarterly* (December, 1900), Vol. XV, p. 581.

over, allows its accumulated fund of durable wealth to deteriorate. Since it spends little time and energy in keeping its durable wealth in repair or its volume intact, but spends most of its time and energy in producing ephemeral goods for immediate self-gratification, its great architectural monuments, if it has any, sink into decay; its buildings become dilapidated for the same reason; its soil becomes depleted because no energy is spent in conserving its fertility; the people live, as it were, from hand to mouth, and everything tends downwards.

When production exceeds consumption, on the other hand, not only are durable forms of wealth conserved—kept in repair and intact—but they are continually improved and new forms produced. There is energy to spare from the work of producing ephemeral articles for immediate consumption, and time is devoted to permanent works and new forms of construction. Durable goods multiply in quantity, capital accumulates, more and better tools and equipment are provided, and productive power accumulates by a kind of geometrical progression.

Whether, in the nation at large, production exceeds consumption or not depends on the general habits of the average person. If the average person demands large quantities of those things which supply physical and temporary satisfaction, such as luxurious food and drink, fashionable clothing, and expensive amusements, there will be a tendency for consumption to exceed production. If, however, the average citizen is satisfied with the kind of food which nourishes, and increases strength and efficiency, with clothing which affords comfort and convenience, with amusements which are inexpensive and which tend to preserve the health, strength, and agility of both mind and body, there will be a tendency for wealth to accumulate.

Other factors are, however, involved. There might be a population with simple habits such as we have indicated, but with no desire for the durable satisfactions of life and with little energy to devote to production. Such a population would necessarily remain in a low state of civilization. It would not provide abundantly either for the temporary or for the permanent means

of satisfaction, but would remain in sloth and squalor. But if, in addition to the simple habits of consumption so far as food, clothing, and amusements were concerned, the average person possessed an intense desire for durable goods,—for architecture, libraries, schools, and other civilizing agencies,—the conditions would be favorable to the accumulation of wealth and to all forms of economic progress. If, in addition to all these, the average person were energetic and not disinclined toward work, —if he were willing to study hard and work hard, and if his motives were such as to drive his mind and body at high speed,— the conditions would be still more favorable. This combination of favorable conditions would make progress almost a necessity. Nothing except a geological cataclysm or a world war would prevent such a people from advancing in the arts of civilization.

Preference for durable goods. It is to be borne in mind that the motives and desires of people are fundamental to this problem. As was shown in a previous chapter, any people can have as much progress and as high a state of civilization as they desire, provided they desire them strongly enough and are willing to pay the price.

Value of a man. From the standpoint of national prosperity the value of the individual depends on the excess of his production over his consumption. The following formula will determine with mathematical accuracy how much a person is worth from the standpoint of national prosperity:

$$V = P - C$$

In this formula V stands for value (that is, the value of the man); P stands for his production; C, for his consumption. Thus the formula reads, The value of the man equals his production minus his consumption. In the cases where his consumption exceeds his production his value is negative; he is a drag on progress, and the world will at least save his victuals when he leaves it.

The whole life is the unit. Lest this be too hastily interpreted, it should be pointed out that a human life as a whole,

and not a fragment of it, should be regarded as a unit. The consumption of a child exceeds his production, but this does not condemn him. So, likewise, during the declining years of those who reach a good old age consumption may exceed production, but this does not condemn the life. If the life as a whole produces more than it consumes, it leaves the world richer by that difference.

Again, production should be given a very wide interpretation. One may produce without handling material goods of any kind, but by inspiring the productive virtues in others, by teaching productive skill to other people, by scientific investigation, by transmitting knowledge, and in various other ways. If, after making all allowance for these different forms of productivity, the mature individual in sound health finds that he is producing less than he is consuming, it is time for him to begin to consider his ways and to experience a change of heart. He needs to be converted from a waster into a producer.

Boarders at the national table. Dairymen sometimes use the term "boarder" to describe a cow whose feed and care cost more than her milk is worth. Every wise dairyman tries to get rid of his boarders and keep only those cows whose production exceeds their consumption. The formula $V=P-C$ applies very clearly to the value of the cow. A wise farmer would not keep a horse whose production did not exceed his consumption. A manufacturer would discard a machine which required so much power, care, oil, repairs, etc. as to exceed the value of its product. It would seem that men ought to be held to at least as high a standard as that to which cows, horses, and machines are held. A man who falls below that standard is as much of a drain upon his country as is the cow, horse, or machine.

The class of boarders includes not simply the tramps and beggars but everyone else who is not usefully engaged, even though he or she lives upon his wife's or her husband's earnings, his wife's or her husband's fortune, or upon inherited wealth. The class includes even others. Even those who are usefully

engaged may be consuming such expensive products and may require so many servants to wait upon them as to use up more man power than they replace by their own work. It would be an interesting exercise in patriotism if every mature person should ask himself seriously whether the country is the gainer or the loser by reason of his existence, whether the man power required to produce for him and take care of him is greater or less than the man power which he contributes to the nation's fund of productive energy by his own work.

The conservation of man power. The importance of this consideration is peculiarly clear in a time of great national crisis, such as the World War of 1914–1918, when all the liberal nations were at death grips with a military autocracy. The necessity of conserving every ounce of man power was upon every nation. We saw clearly then that anyone who was not usefully engaged was a menace rather than a help to us in our struggle. The food alone which such a person consumed was acutely needed, to say nothing of the man power which was used up in other ways by his wasteful habits of consumption. Even those who were usefully engaged should have understood that luxurious consumption on their part was an interference with the plans and purposes of their country. To consume unnecessary luxuries is to require an unnecessary quantity of man power to produce for one, and necessarily reduces the quantity left for fighting the nation's battles or producing necessary supplies. The same principle applies in time of peace, though the results of wasteful consumption are not then so dangerous nor so tragic as in time of war.

CHAPTER XLII

RATIONAL CONSUMPTION

Difference between a high and a rational standard of living. Economists have generally classified standards of living on the basis of their cost or expense. A high standard of living has meant merely an expensive standard; a low standard of living has meant simply a cheap standard. Very little attention has been given to the difference between a rational and an irrational standard. By a rational standard of living is meant one which increases the margin between one's production and one's consumption. In the formula $V=P-C$, as given in the preceding chapter, the most valuable man is the one in whom P exceeds C by the greatest margin. The purpose of the present chapter is to contend that the most rational standard of living is the one which produces the most valuable man.

This margin of difference between P and C would be increased, of course, either by decreasing C, by increasing P, or by doing both at the same time; that is, if, without reducing in any degree his efficiency as a producer, a man were to reduce his cost of living, he would thereby be adding to his value from the standpoint of progress. To that extent he would enable the community to produce more than it consumed. He would thus be a factor in the accumulation of productive power or of the durable products of civilization. If, however, by reducing his cost of living he at the same time reduced his productive efficiency in the same proportion, there would, of course, be no gain, and there might be some loss involved. If, on the other hand, by spending more on himself, especially on books and other means of education, on tools, or on more nourishing food, he were able to increase his productive efficiency, his increase in consumption would justify itself.

From this point of view the problem for every individual who desires for any reason to add to rather than subtract from the strength and prosperity of his country is to adopt that standard of consumption which will leave the largest margin between production and consumption. From the same point of view it would frequently be necessary that one man should spend more on himself than another would be justified in doing. Take, for example, a great surgeon, whose time is exceedingly valuable, not only to himself but to the community he serves. He might very properly keep an automobile, a chauffeur, and other timesaving devices and agencies. He might even keep a valet to look after his clothes. If these forms of expenditure would enable him to give more people the benefit of his skill, it would be to their advantage for him to spend money in these ways. This applies to all others whose time and services are valuable to the community. For the same reason he might, by increasing his consumption in various ways, increase his production more than enough to pay the added cost of his living. But an inexperienced surgeon, whose time is not valuable to the community,—who, in fact, has time to spare,—could not properly indulge in the same timesaving devices. For such a person to employ a valet or even a chauffeur would be ridiculous waste and ostentation.

Buying trinkets is not good for business. In opposition to this point of view there is a popular theory to the effect that lavish expenditure is somehow good for business. The difficulty with this argument is that it always assumes that if the individual is not consuming lavishly, he is not spending but hoarding his money. It is surely as good for business and labor that one should spend money on builders and architects as on milliners and confectioners. He who consumes lavishly spends his money on confectioners, milliners, and other producers of immediate and temporary satisfactions. He who consumes rationally spends as much money as he who consumes lavishly, but spends it on things which build and improve rather than on things which merely afford temporary gratification. A com-

munity of lavish consumers would, of course, give actual employment to those whose work is to amuse and gratify, but little employment to builders and others producing for future generations. A community of rational consumers, on the other hand, would give more employment to those who build for future generations, and less to those whose work is to gratify the interests of the immediate present. There is no essential difference in the amount of money spent in the two cases, provided the two have equal quantities of money to spend. The difference is in the way they spend it and in the direction they give to enterprises and industry. The community that spends money in building for future generations will improve from generation to generation; each generation will inherit from the preceding one a larger fund of durable wealth and will add to this and bequeath a still larger fund to successive generations.

Buying durable goods is investing for the future. If we were to start these two communities side by side, with equal numbers and equal natural resources but with different habits of consumption, it would not be many generations before a marked difference could be seen between the two communities. The community which spent its income for immediate gratification would fall behind the one which spent a part in building for the future. It would not be many generations before the latter community would outstrip the former, and the people from the former would be emigrating to find employment and other advantages in the latter.

The miser and the spendthrift. Instead of placing the miser and the spendthrift in opposite categories, we should really put them together. The miser is a lavish consumer in a most important sense. A consumer is defined as one who uses wealth for his immediate gratification. In a previous chapter consumers' goods were defined as goods used for direct and immediate satisfaction. Now a miser, instead of using his wealth productively, keeps it for his direct and personal enjoyment. With extreme gratification he counts his hoard. He loves to handle it, to see it glitter, and to hear it jingle.

He is in the strictest sense a consumer of gold. He is very much like the spendthrift in that he gives up everything in order to get gold and to enjoy it personally, just as the ordinary spendthrift gives up everything for personal enjoyment of other kinds. If, instead of hoarding his gold in his cellar, our traditional miser were to use it in gilding his house, no one would doubt that he was a spendthrift. Whether he hoards his gold in his cellar or uses it for purposes of adornment makes very little difference. The same amount of gold is withdrawn from circulation, and much the same effect on the market is produced in either case.

Both the miser and the spendthrift should be contrasted with the rational buyer, or the investor in durable goods. The true investor buys goods of which he himself will probably never be able to absorb the full utility. He buys goods that will last so long that future generations will get a part of their utility. Those future generations will therefore have a better start than he did. If this is kept up indefinitely, generation after generation, by all members of the community, it will be a very prosperous and progressive community; but if each individual of each generation merely says, "What has posterity ever done for me that I should be called upon to do anything for posterity? Let us eat, drink, and be merry!" that will always be a backward community.

The case of rival communities. It was suggested above that if two communities started side by side with equal natural advantages but with different habits of spending, we might get a test of the comparative merits of these habits. This may be used likewise as a means of testing, in imagination at any rate, the rational quality of a standard of living. That standard of living which would enable a community or nation to make the most rapid and permanent progress would have to be commended. Something depends, however, on our definition of progress. There may be about as many ideals of progress as there are people who have ideals. Without attempting a full and complete definition, it would seem fairly safe to sug-

gest that among other things progress should include general improvement in comfort, well-being, and satisfaction.

The whole life of the nation as well as of the individual to be considered. Whether this form of progress is worth what it costs or not is another question. The individual spendthrift doubtless thinks that his immediate satisfaction is more important than his future well-being or that of his descendants. He therefore endangers his future well-being for the sake of satisfaction in the present. To him progress is not worth the price. The price is present abstinence. He would probably not deny that saving and economy would make for progress (that is, would make him better off in the future); he would merely say that he did not care for progress so much as for present gratification. So with a spendthrift nation; it might agree that accumulation of wealth and improvements in comfort and well-being would be characteristic of progress and that thrift and economy would contribute to that end, but it might decide that it did not care so much for progress as for present gratification. A nation feeling this way gets what it prefers. The future, however, probably belongs to those individuals and those nations which possess more of the time sense,—to those who are able to think of the whole of life as a unit rather than of every moment as sufficient unto itself.

Leaving out of the discussion for the present the question as to whether prosperity is worth while or not, but assuming that it is worth while, the test which we have suggested would be a good one. What standard of living, if adopted and followed persistently generation after generation, would increase the comfort and well-being of the community and develop the power to support increasing numbers of people and support them better, to add to the productive power of each generation, and ultimately to raise the economic, social, political, and even military strength of the nation to the maximum? Granting that there are other factors in the problem, we still have the right to insist that the standard of living is one important factor. The standard of living which contributes most to progress as we have

defined it is therefore to be commended. That standard of living will contribute most in which the net contribution of the average person is the highest; that is, where his production exceeds his consumption by the widest margin.

Let us return to the formula $V=P-C$. That is the best standard of living which enlarges the value of the average person to the maximum.

It must begin to appear that rational consumption is as important a factor in national prosperity as efficient production. The relation between consumption and production is even closer than we have yet shown it to be. In a most important sense useless consumption is a waste of labor, or of productive power. It requires labor, or productive power, to produce everything which we consume. If our consumption is such as to enable us to give back an equal amount of productive power, there is no waste; but if we consume in excess of that which is necessary to maintain our working capacity at its maximum efficiency, the labor which produced the things which we consume in excess is wasted as truly as though it were badly directed or were working with crude and unsuitable tools.

Liberal ideas as to what is necessary. It is well, however, to be rather liberal in our ideas as to what is necessary in order to maintain a man's working capacity at its maximum. Considerable recreation and relaxation are always recognized as necessary. The anticipated enjoyment, not only of games and other forms of recreation but of objects of comfort and delight, is a spur to energy. It is not only a spur to energy; it is also a means of creating and preserving a joyful frame of mind, without which sustained effort is impossible, and without which it is frequently asserted that no really fine work of any kind is ever done.

Joy in work. Looking forward to a holiday or a vacation has sustained many a laborer through weeks and months of study and toil. The desire to possess a bicycle or an automobile has galvanized many an otherwise indolent boy into strenuous productivity. The pleasure of giving useless presents to their chil-

dren at Christmas time has lightened the toil of many a father and mother through many a hard winter. In our attempts to define a rational standard of living we must not overlook a multitude of things which people want and want intensely without being able to give any good reason why they want them. Women can no more give a reason why they like babies and finery than a fox terrier can give a reason why he likes to chase cats. There is no more certain way of spoiling a boy than by compelling him to give a reason for everything which he wants and refusing to allow him to have it unless his reason is satisfactory to older people. It would be equally unwise to try the same plan with grown-ups. We must be rather careful, therefore, in defining a rational standard of living, not to eliminate many things which no one is able to give a very good reason for desiring, but which, nevertheless, are desired with an intensity which cannot always be expressed.

Tools as consumers' goods. The world has undoubtedly lost much, in productive efficiency as well as in the joy of living, through its failure to appreciate the possibilities in the direction of turning tools and other producers' goods into consumers' goods. That one must have good tools to do good work has long been recognized, but we have scarcely begun to realize the full meaning of the term "good tools." It is not only necessary that they be capable of doing their purely mechanical work; it is also essential that they please the mind of the worker. They must be pleasing to look upon as well as agreeable to the hand.

The purpose of a tool is to bridge the gap between the worker and the object upon which he is working,—to enable him to transfer to the object the idea or plan which he has in mind. It must therefore fit the mind of the worker as well as his hand and his arm.

The importance of having tools which help to keep the worker in an agreeable frame of mind is not so much in the fact that he can do more or better work in a given minute or a given hour, though there is something in that; the chief importance

lies in the fact that he can keep at it for more minutes, more hours, more days, and more years.

Coaxing ourselves to work. Some rare geniuses are able to work regularly and all the time, "taking infinite pains" and apparently never tiring. Most of us, however, are desultory creatures who have to coax ourselves to work steadily. It is easier to coax ourselves to work properly if our tools are such as we delight to handle and our workshop is a place where we delight to be.

The writer remembers a venerable farmer who seemed to be the very embodiment of the spirit of work. The habits of a lifetime had got into his very bone and muscle. Work seemed to be his chief pleasure and idleness his chief pain. Yet he confided to the writer that he feared he lacked the moral character which was necessary to set a gatepost properly. He knew that it ought to be set four feet deep,—that if it were set less deep than that, the gate would sooner or later begin to sag and give trouble. Yet when he was actually digging the hole he found his courage and his determination gradually weakening. When it was three feet deep it "looked deep enough," and unless he rallied all his moral force he would stop somewhat short of the necessary four feet. As another means of supporting his character and encouraging himself to do what he knew he ought to do, he never undertook to dig a post hole unless he had all his tools in the best possible shape. It was harder to persevere with poor tools than with good tools. A new tool in which one takes some pride is a great help in such times of moral strain.

Aside from their effect upon the quantity and quality of the work which a person can do, handsome tools contribute their share to the sheer joy of living. Those people who are not obliged to work have the same need as others for pleasing effects. Not having any use for tools or other objects of utility, they take to collecting useless objects, somewhat after the fashion of the bower bird. That bird, it will be remembered, gathers bits of glass, colored string, broken china, bright peb-

bles, and spreads them before her nest, for no purpose, apparently, except the pleasure of looking at them. Now tools may be just as beautiful as the greater number of those useless objects which people of leisure and bower birds collect for their own delectation. Those who work spend a large portion of their time with their tools and in their shops, more than they are likely to spend anywhere else except in their own homes. Next to the adornment of their homes, the adornment and beautification of their working-places must furnish them the pleasure of living.

Pride in work. The spirit which regards work as a more or less repulsive necessity—which tries to cover up in many ways the evidences of work—is probably responsible for a large part of the neglect which we have shown in the case of our working-places. Naturally enough a person who regards work merely as a disagreeable necessity—something to be ashamed of and avoided on every possible pretext—is not likely to spend very much money on the polishing or adornment of his tools or the beautification of his working-place.

No rural neighborhood, for example, is quite so desolate as that from which people retire as soon as they have accumulated enough to enable them to live in town. Farmers who retire as soon as they can possibly afford to do so are not likely to spend much money in adorning their farmhouses or in making the neighborhood attractive. It is only where you find farmers who are glad that they are farmers—who expect to remain farmers and whose children look forward to the same career—that you find the farms, the homes, and the community adorned and embellished with the evidences of civilization.

Absentee ownership. No town or section of a town is generally quite so unattractive as the place where the people work. It has not occurred to many of the owners of these working-places that the people really live there a good portion of their lives, and that if they cannot get a part of their joy of living there they will miss a good deal of it. No doubt this is due partly to the fact that the owners themselves live elsewhere. In

this respect a factory district resembles a farming district whose land is owned by absentee landlords. The surplus which the land affords is all spent somewhere else,—where the owner lives,—in adorning and embellishing his home; there is none left to adorn and embellish the countryside. Similarly, the surplus which the factory yields is spent somewhere else, usually as far from the factory as the owner and his family can get.

If it were not for the fact, referred to above, that we have inherited certain aristocratic traditions (or else that we try to ape those who have) and are rather anxious to get away from the sources of our incomes, we might find it possible, in some cases at least, to live near our places of business. If we all did so we should spend our money there and should also, if we could afford it, beautify those surroundings as we now beautify the suburban districts where we live.

What is drudgery? Even inside of our homes or dwelling-places the same tendencies show themselves. When the people who can and do appreciate art and beauty all keep servants to do the housework, such places as the kitchen, the laundry, and the scullery, where the necessary work of the household is done, are unattractive places. Adornment is reserved for those parts of the house where the family live. Even those people who love beautiful things and, at the same time, have to do their own household work, frequently imitate the same customs. It is unnecessary to remark that their work seems like drudgery because it has to be done under unattractive conditions. There are, however, many fine exceptions to this general rule, as in the case of the old-fashioned rural kitchen. This noble institution could never have developed except among people of intelligence and taste who cheerfully accepted the fact that work was a necessity and tried to make the most of it. There was no pretense that living and working could be divorced and no desire to keep them apart. There was the frank recognition of the fact that life must consist very largely of work, that the working-place and the living-place could not be separated, and that the joy of life must be derived largely from the working-

place during the working-time. Having once accepted the fact that work is a necessity, and having developed customs and institutions in harmony with it, there is no further mystery connected with the fact that such people took their work cheerfully and that it never occurred to them that it was drudgery.

Unfashionableness of work. It is astonishing how much of the fashion of the world is due to the desire to avoid the appearance of having to work, or even to advertise the fact that one does not have to work. In ancient times certain Chinese magnates used to allow the finger nails to grow to extraordinary lengths as a visible sign that they did not have to work. The binding of the feet of the girls is said to have had the same origin. The train, which only lately was a fashionable necessity for every lady in Christendom, answered much the same purpose.

Seeing that we have been so anxious either to avoid work or at least to avoid the appearance of having to work, it is not strange that we have done very little to make our work agreeable. The opposite tendency shows itself once in a while, however, as in the case of those New England shoemakers of an earlier day who coöperated to hire readers to read to them while they plied their trade. Such people cannot be kept down. They built up a great shoemaking industry in New England. One finds good workmen who delight in nice tools,—tools with which it is a pleasure to work,—and who, if they have an opportunity, adorn their shops with flowers. A good farmer usually likes to work with a handsome team, well groomed and well harnessed. The team is to him both a consumers' good and producers' good. There is not much doubt that such a farmer works more cheerfully and more steadily and finds life more enjoyable than if he tried to get along with an ill-matched, unattractive team. It is reasonable to suppose that we should all do better and more persistent work and get more enjoyment out of life if we took some pains to make the conditions of our work attractive. If this is so, it is a matter of great economic importance and one which will contribute to

the prosperity, strength, and greatness of the nation, and even more to the enjoyment of the people. Expenditure for such things would form a part of a rational system of consumption. But it is important that all such enjoyable consumption should be regarded in its true relation to the problems of the national life upon which our individual lives depend in the long run. To forget its relation to the joy of work and to think of it as an end in itself, unrelated to the larger problems of life, is to diminish our own value to the nation and, to that extent at least, endanger the position of our posterity.

CHAPTER XLIII

LUXURY

Different classes of consumers' goods. Consumers' goods have been divided into four classes, according to the kind of desires which they are designed to satisfy. They are necessaries, comforts, decencies, and luxuries. This, however, is at best only a rough classification. It may seem fairly easy to distinguish between necessaries and comforts, and there are doubtless many cases where goods are easily classified; but there are also many line cases where it is difficult to determine whether the good in question is a necessary or a comfort, or even a decency. Another difficulty which tends to obscure the distinction is found in the fact that no one, however poor, confines himself to necessaries. Part of his expenditure will go for comforts, part for decencies, and part even for luxuries. Again, no one, however rich, can avoid the buying of necessaries and comforts.

Necessaries. In a general way we may define necessaries as all goods which are required for the maintenance of physical health and strength, not only of the mature man but also of his family and even of his young children. In discussing what used to be called the iron law of wages, it was said that the natural wages of labor are made up of those things which are necessary in order that the laborer may maintain his health and strength and reproduce his kind so as to maintain the supply of labor without increase or diminution. Aside from the unwarranted use of the word "natural" as applied to this rate of wages, it would be impossible to say that such wages would consist entirely of necessaries. It is quite possible that the laborers might demand luxuries and forego the gratification of their domestic instinct unless they could get them. In that case wages would

have to be high enough to provide the laborers with these luxuries; otherwise they would not marry and reproduce their kind with sufficient rapidity to keep the supply of labor intact. It would, in that state of society, be necessary to pay such wages as these, but it could hardly be said that everything which these well-to-do laborers consumed could be classified as necessaries of life. In short, wages which will enable the laborer to enjoy comforts, decencies, and luxuries, as well as necessaries, may have to be paid in order to keep up the supply of labor.

Comforts. Of these three classes of goods, comforts are the most difficult to define. While not absolutely necessary for the maintenance of health and strength, still they can hardly be dispensed with in any society where life is really worth living. A young and vigorous person might, by running to and from his work in cold weather, dispense with an overcoat. From his point of view an overcoat could hardly be called a necessary, and yet it would be a great comfort. Cushions or upholstered furniture, spring mattresses, etc., can hardly be called absolute necessaries, and yet they would be considered almost indispensable by the average family.

Decencies. The dividing line between comforts and decencies is likewise obscure. By decencies we mean those articles of consumption which the habits or customs of one's neighborhood or one's class prescribe and without which the individual or the family would feel that it could scarcely maintain its position of respectability. In a community where military traditions are strong and society tends to be stratified, a military officer could almost lose caste if he condescended to ride on a street car. In such a community a private carriage would seem almost to be a necessary, though according to our definition we should call it a decency. Anything which an individual member of any class, occupation, or profession would feel ashamed to be without would come under our definition. Adam Smith[1] included both decencies and comforts under necessaries and

[1] The Wealth of Nations, pp. 466–467. The Clarendon Press, Oxford, 1880.

gives a very clear description of the difference, as it appeared to him in his day, between necessaries and luxuries, the two classes into which he divided all consumable goods.

By necessaries I understand, not only the commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without. A linen shirt, for example, is, strictly speaking, not a necessary of life. The Greeks and Romans lived, I suppose, very comfortably, though they had no linen. But in the present times, through the greater part of Europe, a creditable day-labourer would be ashamed to appear in public without a linen shirt, the want of which would be supposed to denote that disgraceful degree of poverty which, it is presumed, nobody can well fall into without extreme bad conduct. Custom, in the same manner, has rendered leather shoes a necessary of life in England. The poorest creditable person of either sex would be ashamed to appear in public without them. In Scotland, custom has rendered them a necessary of life to the lowest order of men, but not to the same order of women, who may, without any discredit, walk about barefooted. Under necessaries, therefore, I comprehend, not only those things which nature, but those things which the established rules of decency have rendered necessary to the lowest rank of people. All other things I call luxuries, without meaning by this appellation to throw the smallest degree of reproach upon the temperate use of them. Beer and ale, for example, in Great Britain, and wine, even in the wine countries, I call luxuries. A man of any rank may, without any reproach, abstain totally from tasting such liquors. Nature does not render them necessary for the support of life; and custom nowhere renders it indecent to live without them.

Marshall[1] divides consumers' goods into necessaries, comforts, and luxuries, making no special class to be called decencies.

This brings us to consider the term "necessaries." It is common to divide wealth into necessaries, comforts, and luxuries; the first class including all things required to meet wants which *must* be satisfied, while the latter consists of things that meet wants of a less

[1]Alfred Marshall, Principles of Economics, pp. 67–69. Macmillan & Co., Limited, London (fifth edition), 1907.

urgent character. But here again there is a troublesome ambiguity. When we say that a want *must* be satisfied, what are the consequences which we have in view if it is not satisfied? Do they include death? Or do they extend only to the loss of strength and vigour? In other words, are necessaries the things which are necessary for life or those which are necessary for efficiency? . . .

It may be true that the wages of any industrial class might have sufficed to maintain a higher efficiency, if they had been spent with perfect wisdom. But every estimate of necessaries must be relative to a given place and time; and unless there be a special interpretation clause to the contrary, it may be assumed that the wages will be spent with just that amount of wisdom, forethought, and unselfishness which prevails in fact among the industrial class under discussion. With this understanding we may say that the income of any class in the ranks of industry is below its *necessary* level, when any increase in their income would in the course of time produce a more than proportionate increase in their efficiency. Consumption may be economized by a change of habits, but any stinting of necessaries is wasteful.

Luxuries. Where comforts or even luxuries have entered into the laborer's standard of living, it would undoubtedly be true, as Marshall suggests, that any forcible reduction of wages would result in less efficiency on the part of the laborers. From the standpoint of either the lawmaker or the employer, therefore, all those things which the customs of the time and country give to the laborer must be considered as necessaries. To withhold a portion of the laborer's wages would not result in the mere cutting out of a few luxuries from his consumption. He would be quite as likely to cut down his consumption of physical necessaries as of those things which, from an absolute point of view, could be called decencies or luxuries. It is a well-known fact that high-spirited people, with social standards and traditions to maintain, will, if they find themselves in reduced circumstances, deprive themselves of absolute physical necessaries of life in order to keep up appearances. This, of course, is certain to reduce their efficiency.

While this is a final consideration so far as the employer or the lawmaker is concerned, it does not alter the fact that if these people could be appealed to on moral or other grounds to rationalize their habits of consumption, they would be much better off. If they would reduce their consumption of luxuries and increase their consumption of the necessaries of life, not only their working efficiency but their general economic well-being would be improved. "Wherefore will ye spend your money for that which is not bread?" demanded the prophet. He was making his appeal, however, directly to the individual and not proposing any control of consumption by law.

Luxuries have very much the same meaning today as that which Adam Smith gave to them. They are articles of consumption which are not demanded either by the physical health and strength of the people or by the rules of society, but are wholly matters of individual indulgence. The dividing line, however, between decencies and luxuries is still very obscure. If a person belongs to a small group of spendthrifts, it may be claimed that the rules of his social group compel him to spend money lavishly on things which others would regard as pure luxuries. He may therefore claim that these are only decencies because they are prescribed by the rules of his group or class. Instead of accepting the verdict of any special class or set, it would seem better to confine our idea of decencies to those things which are prescribed by the almost universal consensus of opinion of the time and place. Thus, in America, for example, it would be almost universally thought to be indecent for men and women to appear in public places, even in warm weather, without shoes, though there are certain isolated communities where this rule would not prevail. Before the advent of the waist shirt it was generally regarded as improper for a man to appear at any public place, especially indoors, without a coat. That every woman shall possess certain articles of finery is a rule even among the poorest of people. It will be better, therefore, if we restrict the definition of decencies to those things

which society in general, rather than some special clique or coterie, prescribes as necessary.

Stimulating effect of luxury. Economists have been somewhat divided on the question as to whether a luxury is always to be condemned or not. McCulloch[1] states that any gratification, however trivial, is necessary if an individual is stimulated to work in order to attain it. John Stuart Mill[2] says, "To civilize a savage, he must be inspired with new wants and desires, even if not of a very elevated kind, provided that their gratification can be a motive to steady and regular bodily and mental exertion." It is a well-known fact that in certain low states of civilization the laborer or the peon is content with so few articles of consumption that he will not work efficiently or steadily. If by working three days in a week he can earn wages enough to support him, in the style to which he is accustomed, for seven days, he will work only three days in the week. It has been generally recognized that the only cure for this difficulty is to raise his standard of living and increase his wants, so that he will have a motive for regular and steady work. Many interesting stories are told of the devices by means of which the laborer is induced to work or by which his wife is induced to demand more wages of him in order that she may provide herself with finery.

We need not go to backward countries, however, to find examples which illustrate precisely the same principle. There are men among us who reduce the number of working-hours per day for much the same reason. Finding that they can earn enough in four hours to support them for twenty-four, they choose to work only four hours a day; that is, they go to their offices at about ten o'clock in the morning and stay until about two, and spend the rest of the day at the club or the golf course. There are still others who find that they can earn enough in twenty years to support them for the whole of

[1] J. R. McCulloch, The Principles of Political Economy. Edinburgh, 1825.
[2] Principles of Political Economy, Bk. I, chap. vii, § 3.

their lives. They therefore retire from business long before their physical and mental capacity has begun to decline, and spend the rest of their time in pleasant pursuits.

Economically speaking, however, all these men, from the peon up, are merely choosing between different kinds of luxury. To the peon leisure, sport, amusement, and even rest are luxuries in which he delights. If his desire for this sort of luxury is stronger than his desire for other kinds, he will choose this kind. The same is true of the man who cuts down his working-day or his working-years. To him leisure, sport, and rest are luxuries. If he cares more for these than for such alternative luxuries of other kinds as he could secure by working longer, he will of course choose these.

Material and immaterial luxuries. It is true that by choosing material luxuries, rather than the immaterial satisfaction of leisure and rest, the quantity of material goods which are produced and put on the market is increased. The statistics of wealth are expanded. The census-taker and the tax assessor find more tangible articles of wealth in such a community than they would find in one which preferred to take its luxuries in the form of leisure. Doubtless all of us who are members of a strenuous race, to whom leisure does not seem so very desirable, and also of a race which might be malignly characterized as greedy or gluttonous, having powerful desires for material luxuries, think that we have made much the better choice. We are therefore much inclined to despise the race which chooses otherwise. There is such a thing as a pot calling a kettle black.

A storehouse of labor. There is another argument, however, which goes back at least as far as David Hume, to the effect that luxuries must be regarded as a storehouse of labor which in the exigencies of the state may be turned to the public service. This may mean merely that a community which is expending a large proportion of its energy in the production of luxuries may, in times of great crisis, turn that surplus energy into the work of meeting the crisis. In time of war, for in-

stance, the consumption of luxuries may be cut down, and the productive energy, which had been used in the production of luxuries, may now be used in the prosecution of the war or in the manufacture of munitions and war equipment. This is undoubtedly a sound argument so far as it goes.

In order to put several million men of working-age into the army and navy, and more millions into the munition factories and navy yards, and others into the mines to produce the raw materials, and still others onto the farms in order to increase the food production, it is absolutely certain that extra labor must be secured from some source. It is fairly obvious that there are only two sources from which laborers can be drawn. Those who are not working may be put to work, and those who are doing unnecessary kinds of work may be put into the necessary industries. There is no other possibility. The nation must therefore look about and see what can be done in these two directions.

Most men of working-age are generally, in our civilization, at work doing something which is necessary, convenient, or pleasing. A few more women than men are virtually idle, though they all probably manage to keep busy at something or other. In time of national crisis some of them may work in munition factories or take places in the ordinary factories, shops, and stores, displacing men already employed. Those who are displaced may then enlist or go into munition factories. A much better opportunity is offered in their own homes. Every woman who keeps one or more servants and who is able to do anything either inside or outside the home may do her own housework and discharge her servants. They will then be available for the industries whose expansion is made necessary by the war. Those who are situated where they can have a sizable garden may work advantageously at gardening, but it would be of no great advantage unless they took their work seriously and did not waste their time on a few struggling plants; that is, unless they did an appreciable fraction of what is known as a man's work.

Reducing consumption in times of national crisis. A much greater opportunity lies in the closing or cutting down of all unnecessary industries and occupations. If every luxury-producing industry were closed down, a vast quantity of labor would be released. It would then be available either for military purposes or for the production of the necessaries of life. Our golf courses, baseball fields, and tennis courts could be transformed into farms and gardens. This would add a good many acres to the productive land, and, what is vastly more important, the players as well as the spectators could be used in productive work. These suggestions are enough to indicate that considerable changes in the daily habits of the people may be necessary whenever a great national crisis is to be met.

These changes in habits may profitably go much farther. The people may economize greatly in their consumption. It is amusing to hear some people talk about the waste in American life. You would think that the great American garbage pail was a veritable gold mine if it could only be profitably worked. Doubtless there is some waste there, and it will bear looking into; but if we would consume more food and fewer condiments, relishes, and delicacies, whose real function is to make the food palatable, we should reduce the cost of food about one half. Starch, in the form of grain, potatoes, or coarse vegetables, is our principal food. To this must be added a very moderate amount of protein, fats, and sugar. These, however, may also be made to serve the purpose of making the basic starchy food more palatable. Fruits and the finer vegetables and salads can be made to serve mainly as relishes. Instead, many of us make our meals principally of things which should serve as appetizers, relishes, and delicacies, using starchy food only as a means of diluting them. It is this habit, rather than our garbage pails, with which the French people, who are so much wiser in matters of food than we are, find most fault. As to clothing, if the people patch and darn it and make it last longer, the textile and clothing trades will then have time to produce army supplies. Without these changes of habit and

many others of the same kind, let it be remembered, it is impossible to recruit a great army and navy and at the same time increase the production of supplies for the army and navy as well as of all the basic necessaries of life.

There are, however, two ways in which these changes may be forced upon the people, whether they will or no. If they insist on consuming wastefully and spending their money for things which are not necessary, while men are being at the same time taken out of productive industry, this unbalancing of supply and demand will send prices so high that most of the people, particularly the poor people, will not be able to buy anything but the barest necessaries. The well-to-do may be compelled to reduce their consumption and thereby reduce the demand upon the undermanned industries; that is to say, if the government is wise enough it will put such high taxes upon their incomes as to compel them to reduce their consumption and their purchases. In this case, instead of buying supplies and hiring men with their money, they will turn it over to the government, which will then buy supplies and hire men with it. If the taxes are high enough, women will be compelled to do their own housework and discharge their servants, men will be compelled to close their golf courses and stop going to ball games, and everybody will be compelled to buy cheaper and more nutritious food and to wear his old clothes longer. They must do all these things and a multitude of others in a time when the strength of the nation is being put to the test and its very life is at stake; otherwise no nation can successfully meet the test of a great crisis.

The slogan "business as usual" in time of a great war was the result of crass ignorance of some of the basic facts of economic life. It was sometimes asserted in support of that slogan that the only reason why the people were well-to-do was that they had been spending their money for the products of industry. Therefore, if the people quit spending their money, production would be cut off and prosperity destroyed. But a little intelligent analysis would have shown that it was not pro-

posed to spend any less money in time of war or to hire any less labor than in time of peace. The obvious thing was that the energy of the people had to be completely redirected. The great purpose of most people in time of peace is to gratify their desires. In time of war the great purpose must be to win the war. The energies which had been devoted to the work of producing objects of gratification had to be turned to the work of beating the enemy. If everyone had insisted on having as many objects of desire and gratification in time of war as in time of peace, it would have taken just as many men to produce these objects of desire and gratification, and there would have been none to spare for defending the country. Instead of spending their money directly for their own private purposes, the obvious duty of the people was to turn over as much of it as they could possibly spare and let the government spend it in purchasing war supplies and in paying men to do the few things which are supremely needful for the national defense.

Rapid recovery after a local disaster. Even in cases of great local disaster, such as a great fire or earthquake, it has been remarked many times that recovery comes with amazing rapidity. In spite of the fact that vast quantities of wealth are destroyed, the city soon recovers and becomes apparently as prosperous as ever. Luxury is supposed by some to have an important bearing on this question. The energy which, before the disaster, was spent in producing luxuries is now available to be spent in rebuilding what was destroyed. In order to do this, however, the people must, for a time at any rate, reduce their consumption of luxuries. The individual whose property has been destroyed is to that extent poorer than he was before. He may borrow capital with which to rebuild, but until the debt is paid off, his effective income is considerably reduced. He therefore has less money to spend on articles of luxury; he is virtually spending that money on a new building.

The objection may be raised that the luxury which takes the form of leisure would also furnish a fund of energy for the meeting of a great national crisis or repairing a local disaster.

Men who have remained idle, enjoying leisure, may now go to work to carry on the war or to rebuild the city which has been partially destroyed. This objection is somewhat weak, however, because, in the first place, habits of sloth and idleness are much more difficult to overcome than habits of lavish consumption. The sheer inertia of the people makes it almost impossible to rouse them to extra exertions in time of crisis, whereas the people who have been exerting themselves strenuously in the production of articles of luxury may, with less difficulty, redirect their strenuous energy. In a sense the productive machinery of the community is already going. It can be kept going and its direction changed more easily than it can be started up.

In the second place, when a community takes its luxury in the form of idleness, it is certain to be ill equipped with the machinery of production as well as with the technical knowledge and skill which are necessary to efficient production. If it lacks machinery and technical knowledge and skill it will not be able to carry on a modern war successfully or to repair a local disaster, whereas a community that takes its luxury in the form of material goods will have learned in the process of production much technical skill and will have accumulated vast funds of machinery and tools. If there is anything that modern warfare has taught, it is the superiority in war of the nation that is thus equipped. The technical skill and the machinery which are accumulated for purposes of production may easily be turned to those of destruction, and in war the community that is best equipped for the work of destruction will win. A nation that habitually takes its luxury in the form of material goods and which builds up a vast and well-equipped industrial system, with a great deal of scientific knowledge and technical skill, has nothing to fear from a nation that takes its luxury in the form of leisure.

Reducing the rate of permanent construction. So far the argument seems conclusive in favor of material luxury as against immaterial luxury in the form of leisure and idleness. We are

far, however, from a complete justification of luxury in the ordinary sense. The community that is in the habit of investing its money for the future rather than of buying objects of immediate gratification will likewise have a fund of surplus energy at its disposal. All the energy which has been devoted to permanent construction for the future good of society may, in time of great national crisis or local disaster, be redirected toward meeting the crisis or repairing the local damage. The kind of skill which is necessary to permanent construction is of quite as high an order as the kind which is necessary to the production of ephemeral articles of consumption. All the advantages, in short, which a luxurious community possesses for the meeting of a great crisis are also possessed by the thrifty community which spends a good portion of its income in durable construction and in building for future generations. In the long run the nation that spends a large portion of its energy in permanent construction will have certain advantages over the one that consumes luxuriously. If every farmer, for example, should put back into his farm a part of his annual income, in the way of improvement of the soil, in ditching, draining, fencing, and building, he would be using up surplus energy just as truly as if he spent that amount of money in luxurious consumption. In time of national crisis he can suspend, for the time, further building and improvements on his farm and have energy to spare for the production of more food; or he can dispense with a certain amount of hired help, which will then be available for government purposes. After a few generations the nation whose farmers systematically put back into their farms a part of their incomes will have much better farms and much greater productive power than the nation which merely keeps its agricultural wealth intact and spends the surplus in luxurious consumption.

That which applies to farms applies also to factories, shops, and all other productive establishments. The community which is in the habit of adding to its accumulated wealth in each generation by investing a part of its income in tools and in-

struments for future production will, after the lapse of a few generations, be vastly stronger than the community which merely keeps its productive power intact and consumes all its income. Thus we reach the conclusion that although the luxurious consumption of material articles may be very much better than the luxurious enjoyment of leisure, nevertheless thrift, forethought, and the investment of incomes in instruments for future production are better still. He who does less well than he can, does ill. Therefore he who consumes luxuriously when he might invest productively is doing badly.

CHAPTER XLIV

THE CONTROL OF CONSUMPTION

Sumptuary laws. Luxurious consumption can undoubtedly be condemned on economic grounds as being less desirable than frugality, forethought, and the investment of funds in productive industries and objects of durable satisfaction. Nevertheless it does not follow of necessity that the government should, through sumptuary laws, attempt to repress luxury. To prohibit the consumption of articles of luxury might very easily take away the motive to industry. If the people cannot have expensive commodities they may take their luxury in the form of leisure, idleness, and self-amusement. This, as we saw in the last chapter, is even less desirable than luxurious consumption. If we grant the argument used by Mill and others, to the effect that an increase of wants sometimes has the effect of overcoming the tendency to sloth and idleness, it would follow that if the government should make it impossible for men to gratify these increased wants, it would merely drive the people back into sloth and idleness. This could be counteracted only by other laws, compelling them to work, which would be a kind of slavery. Even the slogan "Necessaries for all before luxuries for any," while good enough in itself, would be a very difficult policy to enforce. It is quite possible that the many will secure more necessaries if the conspicuously capable producers are allowed some luxuries as a motive to production at their full capacity. In other words, if the most capable producers are limited by authority to the necessaries of life, which they could easily earn with a fraction of their time, they are likely to take their luxuries in the form of leisure, thus limiting their production of necessaries or their

performance of useful services. In this case the poor would have fewer necessaries than if the capable producer were allowed adequate motivation for working to his full capacity.

Legislative control not always effective. One of the last things that we learn regarding legislation is that it usually takes a large number of new legislative acts to correct or counteract the unlooked-for results of any legislative act. Another objection to legislative attempts to suppress luxurious consumption is the one pointed out by Adam Smith and others, to the effect that when their habits of life are fixed, men and women will frequently give up the necessaries of life before they will give up luxuries. This applies especially to the attempts to make luxuries expensive by taxing them. When they become very expensive some people will insist on having them even if it takes their whole income to buy them and leaves them little for the necessaries of life.

These arguments, it will be noticed, are based upon the inefficiency of sumptuary laws rather than upon any more fundamental objection to them. In general they seem to produce results which are worse than the thing they try to cure. Nothing whatever can be said, however, against a voluntary foregoing of luxuries and a rationalizing of standards of living on the part of the people themselves. It is one thing for the people to want the right things; it is quite a different thing to try to force them to consume the right things whether they want them or not. It is one thing for the people voluntarily to give up luxuries; it is quite a different thing to compel them by law to do so, whether they are willing or not.

Control of vice is "sumptuary legislation." In some extreme cases, however, a luxury becomes so extremely demoralizing and dangerous to society as to justify government regulation or suppression. There may be undesirable results of such legislation,—there are pretty certain to be; but if these undesirable results are less undesirable than the thing which is suppressed, there is a net gain. Regulation or suppression of vice of all kinds is a kind of sumptuary legislation. If the vicious habit

or the vicious form of consumption is sufficiently injurious its suppression is justifiable, even though some undesirable results may follow its suppression.

There are, however, a good many sentimental objections to sumptuary laws which have no connection with the real objections. We are all consumers, and if the government begins regulating consumption we are each of us likely to come in for a certain amount of regulation. We are rather impatient of all kinds of regulation when it is applied to ourselves, though we may be very patient in regard to the regulation of other people, as we are patient in the contemplation of other people's troubles. We are not all of us in the banking or the railroad business, and do not feel in danger when the government undertakes to regulate those and other special lines of business.

No essential difference between controlling business and controlling consumption. This consideration has led to quasi-serious attempts to draw a sharp distinction between the regulation or control of business and the regulation or control of consumption. But all such distinctions are trivial. Habits of consumption, as stated above, are quite as important to the welfare of the nation as are methods of doing business. To attempt to regulate or control either is certain to produce undesirable results. Nevertheless, where the evils, either of unregulated consumption or of unregulated business, are great enough we must have regulation and take our chances with the evils and difficulties of regulation. When we forget our own personal interests and begin to think in terms of the prosperity, power, and greatness of the nation, all our sentimental objection to either form of regulation will disappear and we shall begin to weigh the evils of lack of regulation against the evils of regulation. Whenever the balance turns in favor of regulation we shall be ready for it.

The national rather than the personal point of view. If one will look around and see what is going on, one will discover that the people who think in terms of nationality rather than in terms of self-gratification are just as prone to legislate on

matters of consumption as on matters of business. It is only those who think in terms of their own interest who are likely to make any distinction. Again, regulation, control, or suppression of the consumption of alcohol is today one of the most widespread and democratic movements in the world. Very few of those who favor this kind of legislation—generally none of those who lead in the movement—have anything personal to gain by it. Most of them do not use alcohol, and it does them very little direct harm. The suppression of liquor is favored by those who have been here long enough to develop a sense of nationality. It is opposed mainly by those who have not been here long enough to develop an interest in the future prosperity, power, and greatness of the nation.

Whenever a nation is facing a great crisis in its history; when its strength and endurance are being put to a severe test; when, in short, it is fighting for its life as a nation,—the people are forced to think in terms of national life rather than in terms of individual life. At such times the people find it just as necessary that the government shall regulate consumption as that it shall regulate production. They also find that freedom of speech is not more sacred or inviolable than freedom of running a business. Military necessity always inaugurates a régime of regulation and compulsion. War is compulsory business from beginning to end. When a nation enters upon a great war it passes instantly from the realm of gold to the realm of iron,—from a realm in which a price list is followed and voluntary agreement is the general rule to one in which authority is obeyed and compulsion is the general rule. Compulsion is likely to apply in all fields of activity, not simply in the field of production and business management, of transportation and food distribution, but also in the field of consumption and even in the field of selling talk for a profit.

Vice as a selective agent. One of the strongest arguments against the public regulation of vice or injurious forms of consumption is that vice acts as a fool-killer and helps to rid the world of those undesirable persons who are unable to withstand

temptation. There is some merit in this argument, and if the fool-killer worked with more accuracy than it seems to do, so that no one but the guilty individual ever suffered from his guilt, the argument in its favor would be very strong. Unfortunately there are not many cases in which the vicious individual injures no one but himself. He is quite as likely to injure others as himself. If it were true that the individual who succumbs to vice never injured anybody else but himself, it might be argued with a good deal of reason that the best way to get rid of him would be to allow him to destroy himself as rapidly as possible,—that by so doing we should in the course of time build up a strong race of people, who could live in the presence of temptation without injury. In a certain primitive state of society, where there was little interdependence of parts, all this might be true. In a highly complex society, such as that with which we are acquainted, it is not true. The individual who succumbs to vice may be a menace to the whole community. The danger is not confined to the innocent members of his own family, who are of course frequently reduced to want and humiliation through no fault of their own.

We must keep certain large and tangible facts always before us when we are considering questions of this kind. The chauffeur who destroys his dependableness through his own vice may occasionally injure himself, but he is rather more likely to injure other people. The locomotive engineer who becomes incapacitated through any kind of vice or bad habit may occasionally destroy himself, but he usually destroys a number of others in the process. The motorman, the train dispatcher, the surgeon, the drug clerk, and a multitude of others who are in responsible positions—and in our interlocking civilization we are all coming to hold responsible positions—imperil others quite as much as themselves if they ever become irresponsible and undependable through drunkenness or any other vice.

Let us grant for the sake of argument that fool-killers are needed to prevent the world from being filled with fools and let

us grant also that certain vices function as fool-killers. Still, we should have a right to insist that the fool-killers should work accurately rather than inaccurately; that is, that they should kill only the fools and not endanger the lives of others. Anything that works inaccurately works inefficiently, from the standpoint of race improvement.

This may be illustrated arithmetically by means of the following tables:

I		II		III	
10		10		10	
9		9		9	
8		8		8	
7		7		7	
6	Average 5.5	6	Average 6.6	6	Average 7
5		5		5	
4		4		4	
3		3		3	
2		2		2	
1		1		1	

Let us assume that we have ten individuals, graded numerically, according to their relative wisdom or foolishness. At the bottom of the scale we rank those graded as 1, 2, 3, etc., whom we may designate as fools. We ascend through the moderately wise to the very wise, whom we will grade as 8, 9, and 10. The average of the whole group will be 5.5, as shown by the first table. Now let us suppose that an inaccurate and ineffective fool-killer is at work, as shown in table II. Instead of canceling only numbers 1, 2, and 3, he cancels 1 and 2 and also 4, 6, and 9. Here is a rather wholesale slaughter, involving a death rate of 50 per cent, and yet the average is raised only from 5.5 to 6.6. This is a pretty heavy price to pay for so slight an improvement. If, however, the fool-killer worked accurately, as shown in table III, canceling only numbers 1, 2, and 3, the average of the survivors is now 7. Here we have a much lower percentage of slaughter, resulting in a much higher improvement in the average. There is something

to be said for a fool-killer that operates so accurately as this. There is a great deal to be said against the one that operates so inaccurately as the one in table II.

Now the question is, Does the vice in question operate accurately or inaccurately? Let us take, for example, the vice of drunkenness, and grant that a locomotive engineer who gets drunk is very likely to be killed in a train wreck; but if, at the same time, he kills several other people who are not drunkards his vice is obviously working rather inaccurately. Let us grant that the automobile driver who gets drunk is likely to kill himself sooner or later; yet if he kills several other people, some of whom are not drunkards, vice is again working rather inaccurately and therefore ineffectively. In fact, anyone in a responsible position is likely to injure a good many other people besides himself if he is addicted to any vice that destroys his dependability.

Any vice which acts so swiftly and so injuriously must seriously endanger the rest of society and must obviously call for public regulation. This applies not simply to the extremely injurious forms of consumption known as vice, but to any kind of injurious or irrational consumption, such as luxury. In a time of national crisis, when every ounce of productive energy is needed to meet the situation, he who consumes luxuriously is causing the waste of productive energy and is thus interfering with the success of the nation. In time of war, when armies and navies must be raised, ships and munitions manufactured on a vast scale, and food and clothing produced more abundantly than ever, the question is always one of economizing productive power. To use up any of this power needlessly in the production of luxuries is to take it out of the nation's industries and even to threaten national disaster. In such times the injury which follows from luxurious consumption is so desperate as to justify public regulation. Even though some injurious results may follow from this regulation, these can scarcely be any greater than those which follow the unregulated consumption of luxuries.

In normal times the danger from luxurious consumption is not so acute and the need for regulation is therefore not so great. In this case we may have to consider whether luxurious consumption is more injurious than the efforts to regulate it. This consideration, however, applies to all other forms of regulation and control. There is involved here a question of balance of profit and loss. It is highly important that on all questions of regulation we balance the accounts carefully. There is some cost in the mere extension of government control and the consequent multiplication of government offices. This diverts men from productive industry into government jobs. Unless they can save more to the country through their efforts as government officials than they could produce if they were left in productive industry, the loss is greater than the profit. Again, if through too much regulation legitimate industries are discouraged to a degree that more than offsets any saving which comes from regulation, there is always a net loss. In the case of mild luxuries which work no very serious injury to anybody, the general rule has been not to waste any energy by multiplying government offices in order to suppress them. But in times of national crisis the policy with respect even to mild luxuries may have to be changed. In normal times as well as in times of crisis the injury from certain extreme forms of luxury may be so great as to justify permanent control, regulation, or suppression.

Luxurious consumption does not increase the demand for labor. There can be no doubt, however, that luxurious consumption is in itself an injury to the public and particularly to the laboring classes, however inexpedient it might be for the government to use its power of compulsion to prohibit luxury. There is an ancient and nauseous fallacy to the effect that the extravagance of the rich gives employment to the poor. Nothing could be any farther from the truth. The extravagance of the rich gives much less employment to the poor than do accumulation by the rich and their investment in various kinds of productive industry. The individual who buys extravagantly does

of course set labor to work producing the objects of extravagance, but the individual who invests largely also sets labor to work producing the buildings, tools, etc. in which he invests. In addition to this he adds definitely to the productive power of the community. Furthermore, labor must be hired to make use of the buildings and the tools, and there is a larger social product out of which to pay their wages. Comparatively speaking, therefore, the extravagance of the rich takes away from the employment of the poor. From that point of view extravagant consumption is a social injury.

Leisure versus luxury. If, as suggested above, there were no ulterior results from the suppression of extravagance, the state would be fully justified in such a course; but if the suppression of extravagance produced merely leisure and idleness, instead of extravagance, more harm than good would be done. We must conclude, therefore, that where a form of consumption has become so definitely vicious and injurious to the rest of society as to produce more harm than would probably be produced by compulsory suppression, suppression must be justified. But where, even though it be harmful, it is not more harmful than other results which would probably follow from its suppression, suppression is not justifiable. It must be remembered, however, that laws suppressing vice are in a sense sumptuary laws. The only difference between these and other sumptuary laws lies in the fact that the forms of consumption which they attempt to regulate or suppress meet with such general disapproval as to make their suppression popular, whereas in other cases the forms of consumption are not universally condemned and their suppression is therefore not generally approved.

Rationing the people. That school of social philosophers who hold that all forms of competition are inherently evil, and that therefore government compulsion and regimentation should be made use of to stop competition, would, if they were consistent, desire to begin with sumptuary regulations. As stated in a previous chapter, there are three main forms of economic competition,—competitive production, competitive bargaining, and

competitive consumption,—and of these three, competitive consumption is infinitely worse than either of the others. By an authoritative standardization of wearing-apparel, food, and other articles of consumption we should tend to eliminate this worst form of competition. That would involve, of course, the organization of society on a semimilitary basis, though the object need not be military conflict. It would mean the prescribing of a satisfactory uniform for all members of the community and also of a uniform diet or ration. Houses, furniture, and other consumable goods as well would have to be standardized and prescribed by government regulations.

There is no doubt whatever that if the people would accept this kind of regimentation and work cheerfully under it, we should prevent the waste of a vast amount of energy and avoid many petty jealousies and heartburnings. Academic costume, whatever may be said against it on other grounds, has the advantage of saving academicians a great deal of perplexity over the question "Wherewithal shall we be clothed?" The costumes and vestments of certain religious orders answer the same purpose. There are also many religious sects, of which the Quakers of the old school were a good illustration, which have succeeded in saving their people from that destructive form of competition which strives, first, to outshine one's neighbors in matters of dress and, second, not to be outshone by one's neighbors.

In a time of great national crisis we have many illustrations of what people may accomplish in the way of economy and effort by putting the whole nation on a fixed ration and also by prescribing the manner of dress of each class of the nation. If the people would submit cheerfully to similar regulations in time of peace, the vast energy which in time of war is devoted to the work of destruction could then be turned to the work of production, and industrial progress could proceed at a stupendous rate. It is not impossible that at some time in the future there may be a real effort on the part of certain ambitious nations to economize their energy in this way in order that they may increase their strength rapidly in preparation for Armageddon.

CHAPTER XLV

THE BATTLE OF THE STANDARDS

Competitive and cheap standards of living. It has generally been taken for granted that the cheap standard of living would drive out a dear standard. It is asserted that people who are willing to live and multiply on a very small income will always tend to displace those who are unwilling to live and multiply except on a liberal income. If sheep and cattle are allowed to multiply and wander at will over the same pasture, it is plain that the sheep will drive out the cattle, not because they are superior in value or in fighting-power but merely because they are able to nibble closer to the ground and to live where cattle would starve. A similar law appears to operate throughout the human as well as the animal world. Those who can live on the least seem at times to be able to drive out all others by eating them out of house and home.

It must be confessed that there are some facts which seem to support this conclusion. The American laborers on the Pacific coast find it very difficult to compete, at least in the unskilled trades, with the Chinese and the Japanese. On the Atlantic seaboard employers of labor have been able to tap various reservoirs of cheap labor, first in northwestern Europe and later in southern and eastern Europe. These laborers, having been accustomed to very small incomes, are able and willing to work and multiply on incomes so small as to drive out, at once or ultimately, either the American laborers or the foreign laborers of a previous immigration. The later immigrants drive out the earlier immigrants directly by accepting lower wages than the earlier immigrants are willing to accept; they drive them out indirectly by multiplying rapidly and thus supplying a new stock of labor where the others would refuse

to multiply. In many farming communities it is found likewise that foreign-born farmers, who are willing to live on less than the American-born farmers, can, if necessary, pay either a rent or a price for land which would bankrupt the American farmer with his higher cost of living. Thus the land tends to pass into the hands of those farmers with the cheap standard of living. On the Pacific coast, again, the same tendency shows itself. The Chinese and Japanese farmers and gardeners are economically able to buy or rent land at a price which an American farmer with his higher standard of living would find impossible. Their competition, where they live in large numbers, forces the price or the rent of land to a ruinous height from the standpoint of an American farmer.

A cheap standard does not always drive out a dear standard. It must be pointed out, however, that not every people with a low standard of living has high competing power. The Mexican peons have as cheap a standard of living as the Chinese coolies, and yet they do not compete successfully even with Americans, who have a higher standard of living. In other words, there must be coupled with a cheap standard of living considerable industrial efficiency. With equal industrial efficiency, the race with a cheaper standard of living seems to have the advantage in economic competition. On the other hand, with an equal standard of living, the race with the higher industrial efficiency has the same advantage in economic competition. In fact, we find that even with a more expensive standard of living, the race whose industrial efficiency expands in proportion to its cost of living holds its advantage in economic competition.

Competing power is equal to production minus consumption. This brings us back to the formula which was used in a previous chapter to express the value of a man: $V=P-C$. The value of a man is equal to his production minus his consumption. By his value we mean his value to his race or nation. That which he adds to the total resources of his nation in excess of what he extracts from those resources is his net contribution to its strength. That nation will be strongest, in the long run, whose

average citizen has the highest value in this sense. That nation will be weakest, in the long run, whose average citizen has the lowest value in this sense. But that citizen's value may be increased, not simply by reducing his consumption but by increasing the difference between his consumption and his production. Adding to his production is just as essential as keeping his consumption within efficient bounds.

If we seek a formula which shall express the competing power of a whole nation, it must be very closely related to the formula which expresses the value of one of its citizens. That formula is $CP=P-C$; that is, the competing power of a nation is equal to its production minus its consumption. The nation or the race in which there is the widest margin between production and consumption will win in economic competition against all comers. If the American farmer were enough more efficient as a producer than the foreign-born farmer to compensate for his higher cost of living, he could hold his own indefinitely in economic competition. It is not, therefore, the cheap standard of living which invariably wins; it is the efficient standard of living. A race with an expensive standard of living, provided every dollar of expense adds something to its productive efficiency, will always win in competition with a race with a cheap standard of living. If, however, the expensive standard is made expensive merely by the demand for luxuries and means of dissipation, the race is hopelessly handicapped and must ultimately lose in competition with other races. But if the cost of living is made high by the demand for strength-giving food and recreation, for means of mental stimulation, or for books, instruments of precision, and other means of technical education, such a standard of living may increase the margin between production and consumption rather than diminish it. In that case not only can the race possessing such a standard hold its own in competition at home but the members of that race can go anywhere in the world and hold their own in competition against the natives. Such a race will be an expanding, colonizing race—wherever its members plant themselves they

will succeed and remain; whereas, if their standard of living is merely expensive without being efficient, they are likely to fail as colonizers.

International competition. A race with a high but inefficient standard of living sometimes finds it necessary to protect itself, at least within its own boundaries, against the competition of races with a cheaper but more efficient standard. Otherwise they would find themselves ultimately dispossessed even of their land. The race with the cheaper and more efficient standard would not only get the jobs in industry but would eventually buy the farms and the businesses at prices which the natives would be unable to pay. The natives would give way before such a race as inevitably as before an army equipped with superior weapons of offense.

Moreover, the problem is not solved by the mere exclusion from our own territory of races with a cheaper and more efficient standard of living. The conflict is merely changed to another field and the outcome postponed to a more remote period of time. International competition is just as real as individual competition within the nation, though it does not seem so real to the average person. In the competition for the markets of the world the race with the cheaper and more efficient standard will have the same advantage as it would have in getting jobs or in buying farms and businesses within the confines of a given country.

The race with the expensive or inefficient standard may hold certain advantages because of the peculiarities of its geographical situation. If it possesses superior soil or superior mineral deposits, these physical advantages may compensate, in part at least, for the inefficiency of its standard of living and enable it to survive in international competition. Superior mineral deposits, however, must ultimately be exhausted. Superior soil can be maintained only by wise management. The nation that depends upon these material advantages for its future strength in international competition must look well to its problem of conservation. If it does not, it will eventually lose these advan-

tages and then its more expensive standard of living will place it under a severe handicap. If so, it need not necessarily perish as a nation, but at best it will live at a "poor dying rate."

Even under conditions of international peace, here is a form of international rivalry which will still persist and under which the victory must ultimately go to the race or the nation with the most efficient standard of living; that is, to the race or nation in which the production of the average person exceeds his consumption by the widest margin.

The real Armageddon. Here is a real Armageddon, the battlefield of the nations,—the place for the ultimate contest for supremacy among the various races and nations of the earth. This is the field where every nation in the world must sooner or later be brought to the test and made to battle for its very existence. It is a peaceful contest, but none the less deadly on that account. Preparedness for this final and ultimate conflict will consist in the study of standards of living and in the adoption of such standards and habits as will increase productive efficiency to the maximum and reduce the cost of living to the lowest point which is consistent with maximum productivity. In the interest of this form of preparedness it will be well for us to ponder the advice of Pythagoras to his son: "Choose those habits which are best; custom will make them the most agreeable."

We may, as suggested above, exclude from our territory races with a cheaper standard of living than ours. Even this requires a government strong enough to guard its boundaries against this form of invasion,—peaceful, but no less deadly than military invasion. Without a government strong and willing to exclude races with a cheap standard, our laborers and our farmers would have to compete with them on our own soil and be driven either to sink to their level or to emigrate. Laborers and farmers, therefore, have quite as great need of a strong territorial state as has any other class. But, as already shown, even this will not absolutely and throughout all future time protect our standard of living against cheap standards. It postpones the

day of reckoning and gives us a few years or centuries of grace in which to rationalize our standard of living and prepare to meet, in international trade and other ways, the competition of cheap standards.

The time to begin rationalizing our standard of living. Seeing that our people must sometime, in some way, meet on the markets of the world the competition of races with a lower standard of living than ours, wisdom requires that we begin at once the study of the problem of efficient consumption as preparation against that day of reckoning. This does not mean, of course, that we must ultimately learn to live on as little as they; but it does mean that we must learn to consume such things as to add to our productive capacity as much as they cost. In other words, it means that if we would survive that competition we must ultimately eliminate from our consumption those expensive things that neither directly nor indirectly add to our strength, intelligence, alertness, or willingness to work, to plan, to save, to invent, and to invest our energies and our savings wisely. The Eighteenth Amendment is doubtless a move in the right direction and will give our people an advantage in world competition, unless—which is not improbable, for we are an inventive people—we straightway invent new forms of waste to take the place of the old.

Household budgets. One of the first things to do in the popular study of efficient consumption is to systematize our expenditures for consumers' goods. Accurate accounting is the key to all scientific business management, as the business world has long known. It is the key, likewise, to all sound farm management, as our farmers are beginning to learn. It is equally the key to all sound or scientific management of the household. The first step toward a sound system of household accounts is to plan the household budget. Too many people consume in a haphazard and inefficient manner because they do not plan in advance what they must have, but buy whatever is most convenient or most enticing at the moment when they happen to have money to spend, or whatever is urged upon them most

skillfully by salesmen. The recent revival of the study of home economics which, as shown in Chapter I, was where the study of economics first began, augurs well for the future. It will enable more and more of our people to become masters of their pocketbooks—making the pocketbook do what they plan that it should do, instead of being mastered by it, buying whatever it tempts them to buy when it is full and only such things as it permits them to buy when it is nearly empty. In other words, things will be bought and consumed more and more according to an intelligent plan as expressed in a budget and less and less

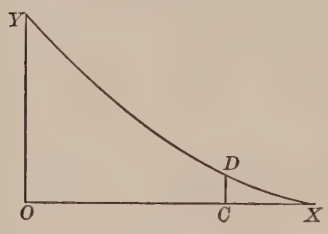

Diagram A

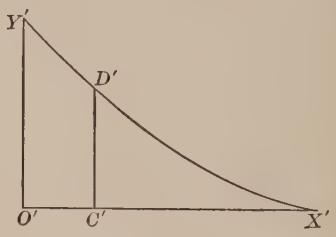

Diagram B

according to the whim of the moment and the immediate state of the pocketbook. The nation whose people lead in this kind of rational consumption need have no fear of the competition of races with cheap standards of living.

Nothing in excess. The old Greek maxim "Nothing in excess" expresses in brief form not only a profound philosophy of life but also a specific rule to apply to the consumption of goods. The law of balance applies here with peculiar definiteness. The well-known principle of diminishing utility, as explained in a previous chapter, makes it certain that the last units of anything consumed in excess will give a small amount of satisfaction to the consumer. This may be illustrated by the above diagrams.

Let the amount spent for Commodity A by a given consumer be measured on the line OX in Diagram A and for Commodity B, by the same consumer, on the line $O'X'$ in Diagram B. Let the benefit or satisfaction of consuming each commodity be meas-

ured on the lines OY and $O'Y'$ in the two diagrams, the curves YDX and $Y'D'X'$ representing the declining utility of successive units purchased as increasing units of money, say dimes, are spent for each. If the purchaser spends so much for Commodity A as is represented by the line OC and so little for Commodity B as is represented by the line $O'C'$, it is apparent that he is not spending his money wisely. If he had saved the last dime which he spent for Commodity A, he would have lost very little benefit or satisfaction,—only as much as is represented by the line CD, or by a very small surface whose height is approximately CD. If that dime were spent for Commodity B it would give him a larger benefit or satisfaction, as represented by the line $C'D'$, or by a surface whose height is approximately line $C'D'$ and whose base is the same as that of the surface representing the loss when a dime less is spent on Commodity A.

It is scarcely necessary to add that wise consumption includes also the elimination of injurious articles of consumption and the cultivation of a liking for those that are beneficial.

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PART VII. PUBLIC FINANCE

CHAPTER XLVI

TAXATION

Classification of revenues. The government as distinct from the people has needs of its own and must have revenue out of which to supply those needs. There are various sources of public revenue, but in modern times the chief source has been taxation. Henry C. Adams, in his work on finance,[1] gives the following classification of public revenue:

- Public Revenue
  - Direct revenue
    - Public domains
    - Public industries
    - Gratuities or gifts, or treasure-trove
    - Confiscations and indemnities
  - Derivative revenue
    - Taxes
    - Fees
    - Assessments
    - Fines and penalties
  - Anticipatory revenue
    - Sale of bonds or other forms of commercial credit
    - Treasury notes

In former times the public domain was made to supply a large part of the revenue for the government. In fact, under the feudal system, property in land and something resembling public office went together. The king had his own demesne; so likewise did his retainers and all members of the nobility. The nobility formed the chief fighting class and likewise the administrators of local government, each deriving his income from the lands which were granted to him.

Public industries have not figured very largely as sources of public revenue, unless royalties from mines could be put in this class. A number of European cities have derived portions of

[1] The Science of Finance, p. 227. New York, 1899.

their revenue from their own water, gas, and electric-light plants. Gratuities and gifts, as well as treasure-trove, are negligible sources nowadays. Confiscation and indemnities belong to a lower state of civilization, where militancy and the lust for conquest prevail. In all civilized governments taxes have become the chief source of revenue,—fees, assessments, fines, and penalties forming subsidiary sources.

What is a tax? A tax is a compulsory payment to the government for which the latter does not return to the individual payer a commodity or a service. The money, for example, which one pays for a postage stamp is not a tax; it is rather the means for the purchase of a service. Where a municipality owns its own water supply and charges water rates, these rates are not in any proper sense taxes; they are, as in the case of the purchase of postage stamps, payments for service. The same is true of the price paid for any direct service which the public renders.

To be sure, the government renders general services for all its taxes; but in the case of a tax there is no attempt to apportion the payment exacted of the individual to the benefit which he as an individual receives. Doubtless everyone receives some advantages from the existence of an army or a navy, of courts, or of policemen; but his tax is not of the nature of a purchase, since he must pay it whether he thinks he is getting anything in return for it or not, and the amount of the tax bears no relation whatever to what he thinks the value of the service of the state may be to him.

Some taxes are absolutely compulsory; others are compulsory only conditionally. An income tax, an inheritance tax, or a poll tax is absolutely compulsory. The individual has no choice in the matter. An excise or a tariff duty may be avoided by avoiding the use of the articles on which these duties are levied. One may avoid the excise duty on tobacco, for example, by refraining from the use of tobacco. And yet when one pays this tax, he is not receiving from the government a service, since the government did not produce the tobacco but only charges

the manufacturer or the dealer for the privilege of manufacturing and selling.

So-called indirect taxes. The taxes just described are generally called indirect taxes. In case of a tariff duty, for example, the importer of the dutiable article pays the tax directly to the government. From his point of view it is just as direct as any tax. It is the general theory, however, that the consumers of the imported articles pay the tax in the form of higher prices. In cases where that happens the consumers may be said to pay the tax indirectly. This is by no means always the case, however, and it is not always easy to determine who does actually pay the tariff duty. It is therefore doubtful whether or not the term "indirect taxation" should be retained in economics. All real taxes are direct in the sense that those on whom they are levied pay their money directly to the government. In some cases, however, the payer is able to shift the tax to somebody else by charging a higher price for a product or by paying a lower price to the one from whom he himself buys the product. The manufacturer of alcoholic liquor pays his excise duty as directly to the government as any other tax, but if he charges the consumer a higher price for the liquor, the consumer is then said to pay the tax indirectly. The manufacturer may also pay the producer of the raw materials a lower price, and in that case it is the producer who pays the tax, in part at least. If the manufacturer carries a part of the burden which he is unable to shift to someone else, he himself bears that burden directly, not indirectly.

Taxes and monopoly price. A common abuse of the word "taxation" is to apply it to monopoly price by saying that the monopoly taxes the people. It is sufficient in a case of this kind to say that the monopoly charges too high a price, or a monopoly price; it does not add anything to the clarity of the discussion to bring in the word "tax." Where the monopoly sells a commodity or a service, even though it sells it above cost, the individual gets what he thinks ought to be the equivalent of what he pays; otherwise he would not have purchased the

article. Similarly, the government might, if it chose, charge more for postage stamps than the cost of carrying the parcels. This would not properly be called a tax; the proper expression would be to say that the government is charging a high price.

Eliminating compulsion in public business. Even where the government derives a part of its revenue from a public industry, the element of compulsion is generally present. If the revenue from the industry does not pay the expenses, the industry cannot become bankrupt and its affairs be wound up by legal proceedings. The government can merely tax the people or derive an enforced revenue from some other source to pay the deficit; that is, it can use its power of compulsion to keep alive an unprofitable industry, whereas an individual or private corporation, lacking the power of compulsion, would have no power to keep its business alive.

Again, it will generally be found that the government exercises some compulsion by excluding competitors from its own particular field. No one is allowed to compete directly with the Federal post office in carrying first-class mail. The government's power of compulsion is exercised in its own behalf. In fact, it is doubtful whether there is a case on record where any government has succeeded in doing anything well on a purely voluntary basis. It has had to use its power of compulsion at some point or other in the enterprise. It has either raised funds by compulsion or excluded competitors by compulsion, has repressed opposition and criticism by compulsion, or in some other way made use of this great advantage which it possesses over all private organizations in order to insure its success.

These observations are made not for the purpose of criticizing or opposing government enterprise, but merely in the interest of truth and accuracy. Government is compulsion; and when properly exercised, compulsion is beneficent. One of the great and really unsettled questions, however, is as to the limits within which compulsion is beneficent and beyond which it is interference.

Earmarks of a good revenue system. Henry C. Adams gives the following as the marks of a good revenue system: (1) It must be adequate to the just wants of the state. (2) It must present itself as a system and not as an aggregation of independent and unrelated acts. (3) In a federated government such as we have in the United States the revenue domain of one branch of the government should not encroach upon the revenue domain of another in such a way as to bring confusion. In other words, there must be harmony and balance between the central and local governments, between the local governments themselves, and between the several organizations of local government. (4) It should provide for elasticity of the revenue at the point where elasticity is needed; that is, the revenue must be capable of increase and decrease whenever and wherever these are needed.

Double taxation. The second of these is of particular importance in the United States of America. Paraphrasing the famous rule of the Donnybrook Fair, we have apparently followed the rule "Wherever you see a thing, tax it." This has led to a great deal of confusion,—to double taxation in some cases and to complete escape from taxation in others. By double taxation is meant taxing an individual or different individuals twice for the same thing. If, for example, a farmer owns a piece of land and also has in his possession a piece of paper called a deed to the land, and if he is taxed once on the land and again on the deed to the land, this is obviously a case of double taxation. If, however, one farmer owns a piece of land and another owns a mortgage on it, the owner of the mortgage is virtually, if not literally, a part owner of the land. If, now, the farmer pays taxes on the full value of the land, and the mortgage owner pays on the full value of the mortgage, there is an equally clear case of double taxation. The double tax really falls on the farmer because, where mortgages are taxed, the interest rates are made higher in order to recoup the lender for the tax which he has to pay.

During the years 1917 and 1918 our Federal government sold large numbers of bonds bearing $3\frac{1}{2}$ per cent interest. One of the arguments was that, since they were free from taxation, one received practically as much net income as he would receive on taxable property yielding nominally 5 per cent but being taxed $1\frac{1}{2}$ per cent. Where mortgages are not taxed, the same argument would apply and would be effective. If in one state a lender is compelled to pay a $1\frac{1}{2}$-per-cent tax on his mortgage, and in another state he does not have to pay any tax, if he is an honest man he would as willingly lend at $3\frac{1}{2}$ per cent in the latter state as at 5 per cent in the former. If he is dishonest, however, he may take his chances on avoiding taxation in the former, and if he succeeds he may receive his 5 per cent net. Again, where a corporation owns certain amounts of visible property, but the shareholders have pieces of paper as evidences of their ownership in undivided shares of this property, if the visible property is taxed and the individuals are also taxed on the pieces of paper which they hold as evidences of ownership, the effect is very much the same as though the farmer were taxed on his farm and also on the deed, which, like the share in a corporation, is only an evidence of ownership.

Overlapping of tax systems. The third of these marks of a good system is also important in this country. The conflict of jurisdictions between Federal and state governments, and between the state governments themselves, has produced a great deal of confusion and also a great deal of double taxation. Various remedies for this situation have been proposed, among others the subdivision of the various sources of revenue, each grade of government to be allowed its own particular source. The Federal government, for example, is by the Constitution given exclusive right to levy duties on imports. Since no state or municipality is permitted to enter this field, there is no confusion here. It has also been suggested that real-estate taxes should be left exclusively to the local governments,—municipalities, counties, and townships. It is thought by certain writers that licenses and franchises also should be left exclusively

to the local governments. Incomes and inheritances would seem to be suitable subjects for state taxation. Stamp taxes of various sorts must apparently be left to the Federal government.

No very clear dividing line has been generally agreed upon for the separation of Federal from state sources of revenue. Certain writers of high authority hold that the income tax should belong exclusively to the states and that the Federal government should keep out of this field. Their views, however, have not received general public support. We already have duplication in this field; that is, in most of our states we have income taxes in addition to the Federal income tax.

Inelasticity of inheritance taxes. The inheritance tax is an excellent source of revenue, being very productive; but it should, from the nature of the case, be a permanent tax not often to be changed. In the course of a generation practically every estate will pass by inheritance and be taxed. But in any given year or decade only a certain percentage of them will pass by inheritance and be taxed. If, therefore, the tax is changed frequently, different estates will bear very different burdens. If, during a few years, a very high inheritance tax prevails, the few estates that pass by inheritance during those years will bear a heavy burden; and if, during another few years, there is a very low tax, the estates which pass in inheritance during those years will bear a very light burden.

An income tax, however, may be changed frequently without injustice to individuals. Everyone who receives a taxable income is likely to receive it every year. The tax may be changed every year without showing any discrimination in favor of or against individuals. This would seem to make it necessary that an inheritance tax should be permanent and be the source of a considerable revenue, but that elasticity should be secured from an income tax, which may be changed frequently as occasion demands an increase or decrease of public revenue.

The characteristic form of American taxation, however, is what is known as the general-property tax. Nearly every state in the Union has had, either in its constitution or on its statute

books, laws requiring the equal taxation of all forms of property. In many cases this has worked to the utter confusion of our financial system. One result is that visible property is taxed and invisible property escapes. The farmer's land and buildings, live stock and machinery, can scarcely be hidden, and the assessor finds them. Many of the intangible and invisible forms of property, however, are difficult to find and can frequently escape taxation. Strange as it may seem, many rural districts show a larger percentage of personal property and a smaller percentage of real estate than most of our cities because much of the farmer's personal property (machinery, tools, etc.) is of a kind that cannot well be hidden. No one really believes that farmers own a larger percentage of personal property and a smaller percentage of real estate than city people, and yet the assessors' books indicate that they do.

Progressive taxation. Various expedients have been adopted to make taxes more just than they are under the crude general-property tax. Among these laws one of the most important is what is known as the graduated or progressive tax. This may apply either to general property, to incomes, or to inheritances. The principle of the progressive tax is that the larger the sum to be taxed, the higher the rate of taxation. To begin with, even an exemption operates to a slight extent as a progressive tax. An income tax which exempts, let us say, $2000 from all taxation and taxes only the excess above $2000 is slightly progressive, even though it is nominally proportional. A tax of 1 per cent on the excess over $2000 would work somewhat as follows: on $3000 the tax would be $10, which is one third of 1 per cent on the whole income; on $4000 the tax would be $20, which is one half of 1 per cent on the whole income; on $6000 the tax would be $40, which is two thirds of 1 per cent on the whole income.

A genuinely progressive tax, however, proceeds farther than this. It begins, let us say, with a 1-per-cent tax on the excess above $2000, 1 per cent more on the excess above $10,000, 1 per cent more on the excess above $50,000, and so on. Under

this scheme, then, the individual who had an income of $60,000 a year would pay 1 per cent on $58,000 (the excess above $2000), 2 per cent on $50,000 (the excess above $10,000), and 3 per cent on $10,000 (the excess above $50,000), making a total of $1880. Whether the tax be an income tax, an inheritance tax, or a tax on general property, the principle of the graduated scale is the same.

Canons of taxation. Adam Smith, in his "Wealth of Nations," laid down what have since his day been called the canons of taxation. They are as follows:

> (1) The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state. . . . (2) The tax which each individual is bound to pay ought to be certain, and not arbitrary. The time of payment, the manner of payment, the quantity to be paid, ought all to be clear and plain to the contributor, and to every other person. . . . (3) Every tax ought to be levied at the time, or in the manner, in which it is most likely to be convenient for the contributor to pay it. . . . (4) Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the state.[1]

The first of these canons relates to the general question of justice; the others are so obviously practical and expedient that there has never been any serious discussion of them. A great deal of discussion, however, has centered round the first. Just what is meant by "in proportion to their respective abilities" has never been definitely decided. At first thought it sounds as though this meant proportional rather than progressive, or graduated, taxation. If we assume that a man's ability is in exact proportion to his income, then obviously if he pays in proportion to his ability he must pay in proportion to his income. But it is contended that a man's ability to pay increases more than in proportion to his income, and that therefore if he

[1] Adam Smith, The Wealth of Nations, Vol. II, pp. 414–416.

pays in proportion to his ability he must pay a progressive, or graduated, tax on his income or his property. That there is some justification for this opinion is evidenced by the almost universal practice of exempting a certain minimum. The individual whose income is barely able to support him and his family may be said literally to have no ability to pay taxes, and yet he has an income. If this is slightly greater than necessary to support him and his family, then he may be said to have some ability to pay taxes. This obviously calls for a certain degree of progression in the way of taxation.

Repressive taxation. The tendency is more and more for expert opinion to favor some sort of progressive, or graduated, taxation as more just than proportional taxation. Just how far in this direction we should go is not easy to determine. It is never wise to kill the goose that lays the golden eggs. Neither is it ever wise to tax anyone so heavily as to drive him out of productive business. If taxes are ever made so heavy upon people who are carrying on large enterprises as to discourage accumulation, enterprise, and thrift, the state will be doing itself an injury. Professor E. A. Ross[1] has suggested a new canon of taxation to add to the four which Adam Smith gave us: A tax should be as little repressive as possible.

The sum and substance of all sound taxation is that the taxes should be as little burdensome as possible. The burden of a tax is twofold. There is, in the first place, the disadvantage to the payer. It is a loss to him to have to give up his revenue. In the second place, there is the discouragement to enterprise which a heavy tax involves. This is particularly disastrous when the government is irregular and whimsical in its taxing moods. When producers never know what to expect from the government and its tax collectors they have little inducement to enterprise. Under such conditions there will be little wealth produced for the government to tax, and things are likely to go from bad to worse.

[1] "A New Canon of Taxation" (abstract), *Publications of the American Economic Association* (1893), Vol. VIII, pp. 49–50.

In case there are undesirable businesses which the government does not care to prohibit, or undesirable habits which it does not care to suppress, the repressive power of taxation may be used. Men may then be made either to pay for their folly, or to give it up to avoid taxation. In extreme cases complete suppression is doubtless better than mild repression; in less extreme cases, such as luxurious consumption, ostentatious dressing, etc., the mildly repressive effect of a tax is desirable.

CHAPTER XLVII

THE SHIFTING OF TAXES[1]

One of the first lessons that the student of taxation learns is that the payer of a tax sometimes shifts the burden in whole or in part onto someone else, thus relieving himself, in part at least, of the burden. This can come about only in the process of buying and selling. The person taxed, in other words, has no means of persuading anyone else, as a favor to himself, to assume the burden; he can only charge a higher price for what he has to sell, or pay a lower price for what he buys, thus recouping himself for what he has paid in the form of a tax. But this matter of raising the price of what one has to sell or depressing the price of what one has to buy is something which is not so easily done as said, as anyone can convince himself by trying it. The buyer of what one has to sell and the seller of what one has to buy will have something to say about it. Unless the tax affects the general conditions of the market in a way which favors the payer of it, he will not be able to sell at a higher or buy at a lower price,—in other words, he will not be able to shift the tax.

The shifting of a tax is the process by which the payer recoups himself or gets from some buyer of his product or service, or from some seller of what he buys, a sum which will partly or wholly cover what he pays in the form of a tax. The one who finally bears the burden is said to bear the incidence of the tax, or the incidence is said to be upon him. In the present state of economic knowledge it is scarcely worth while to attempt the task of locating the final incidence of all kinds of taxes. When the payer of a tax shifts it upon someone else it is not at all

[1] The substance of this chapter is published in the *Yale Review* for November, 1896.

improbable that that person will, in turn, shift it onto a third, and so on. When the process of shifting a tax is once started, it is not easy to tell when or where it will stop or who will bear the final incidence. That such knowledge is greatly to be desired goes without saying. It is a truism that equity in taxation consists in distributing the burdens equitably; but how can this be done, even in theory, unless we know where the burden will rest? As a step in the process of finding out where the incidence will rest, we may begin by examining the conditions which will permit a tax to be shifted.

A tax is shifted only when it affects final values and prices so as to enable the taxpayer[1] to reimburse himself for the tax at the expense of someone else. The shifting of taxes forms a special class under the general phenomena of value[2] and must therefore be brought under the general law of value and price. The first question to arise is, Under what conditions will a tax affect the value of the thing taxed; or, in other words, bring about such a change in the market and such a modification of values as to furnish the taxpayer an opportunity to shift the burden upon someone else?

A tax is no exception to the general law that nothing can change the relative value of an article without first changing the relation between demand and supply. In order to raise the price of anything a tax must either increase the demand or reduce the supply, and to reduce the price it must either decrease the demand or increase the supply. A failure to appreciate fully the universality and persistency of the law of demand and supply lies at the basis of much incorrect thinking on the subject of the shifting of taxes. There is a more or less general opinion that the value of anything is determined directly by

[1] For convenience the following terminology is adopted: The taxpayer is the one who pays the tax in the first place, or the one from whom the tax collector receives it. The bearer of the tax is the one upon whom the burden finally rests. The thing taxed is that upon which the taxpayer's tax is rated, or according to which it is estimated. This seems to be in accord with Professor Seligman's idea as set forth in the *Political Science Quarterly*, Vol. VII, p. 715, and also in his "Essays in Taxation," p. 395.

[2] See Marshall's "Principles of Economics" (third edition), p. 519.

what it costs, and that as a tax adds to the cost it must therefore be added to the price. This overlooks the true relation of cost to value. The cost of anything affects its value only when it puts a check upon production and limits the supply.[1] Whenever an addition to the cost will cause a decrease in the supply or an increase in the demand, it will raise the value of the article in question. But this will not occur in every case. It is scarcely conceivable that a tax can increase the demand for the thing taxed.[2] If it ever does so, the instances must be so rare that we can safely ignore them. This leaves us to the conclusion that a tax can raise the price of the thing taxed only when it occasions a diminution in the supply.

Under what conditions will a tax cause a diminution in the supply of the thing on which it is levied? Whenever it will make the production of any part of the existing supply a source of loss to the producer at the existing price. The supply of different commodities is determined by wholly different factors. In order to arrive at definite conclusions as to the effect of taxation upon the supply of different taxable things, it will be necessary to adopt the following classification:

- TAXABLE THINGS
  - Persons and incomes
  - Commodities
    - Land and natural agents
    - Products
      - Incapable of reproduction
      - Monopoly products
      - Products of competitive industries
        - Produced under increasing returns
        - Produced under diminishing returns

Persons and incomes belong in a class by themselves, since they are not commodities. If a capitation tax is shifted at all, it must be by affecting the price of some commodity which is

[1] Cf. Chapter XXV, What determines the Value of a Thing.

[2] But it may increase the demand for some other commodity by inducing people to substitute it for the thing taxed. There are, however, many general and indefinite social effects of taxation which need not be discussed under the shifting of taxes, since they do not give the taxpayer any special opportunity nor any special advantage over the other members of the community.

inseparately connected with personality. In other words, such taxes cannot be shifted unless they either increase the price of labor or decrease the price of the necessaries of life.

It is difficult to see how a general income tax could be shifted at all, unless it were made heavy enough to decrease saving and reduce the rate of accumulation. A moderate income tax could not make the possession of an income undesirable, and if it applied proportionally to all incomes it could not drive men from one industry to another. If, however, it applies only to a special class of incomes, or to those derived from certain special sources, it might drive some men out of certain occupations. Wherever this results, the diminished competition will enable those who remain in these occupations to earn more and thus reimburse themselves, in part at least, for the tax. When, however, as indicated above, an income tax becomes excessive, or when it is so heavily graduated as to reduce materially the free incomes of the classes who do most of the saving and investing, it is pretty certain to be shifted, in part at least, in the form of a higher rate of interest. The reason is simple. Those who ordinarily do the saving and investing must, of course, do it by consuming only a part of their incomes and investing the rest. If their total incomes are greatly reduced by a heavy income tax, they must invest less, consume less, or both. If they invest less the slower rate of accumulation will make it more difficult for new enterprises to secure adequate capital. The competition among these enterprises for the limited amount of capital will invariably raise the rate of interest. Enterprises that formerly secured all the capital they needed at 5 or 6 per cent are likely to have to pay 7 or 8 per cent, or even more. Our present heavy income taxes (1921) undoubtedly have something to do with high rates of interest. The only possible way to prevent a scarcity of investment capital and a consequent rise in the rate of interest is for other classes to become large savers in the aggregate, thus supplying the investment funds cut off from former sources by the graduated income tax.

A capitation tax necessarily bears most heavily upon the poorer classes and may, under certain conditions, enable these classes to earn more and thus escape a part of its burden. For example, if a certain local community should levy a heavy capitation tax it might drive a certain number of the laborers elsewhere. If the industries of the place were localized the scarcity of labor would enable the remaining laborers to earn better wages. But the wider the area over which the tax is levied, the more difficult it will be to shift it. What the effect of capitation or income taxes will be upon the price of the necessaries of life will depend on the use that is made of the money that is collected. The probability of such taxes' being shifted by causing a reduction in the cost of living seems too remote to call for a detailed discussion here.

Since land and natural agencies are not the products of industry, the only way of reducing the supply of these things is by causing the abandonment of some portion which is already in use or by preventing the appropriation of some portion that would otherwise be used. A tax of less than 100 per cent of the rental value could do neither of these things. Since rent is a pure surplus, no individual owner could have any reason for abandoning his property so long as the tax collector leaves him any part of this surplus. Since such a tax would make no difference in the amount of land cultivated, and would not change the factors which determine the intensity of cultivation, it could not affect the price of the products of the land nor raise its rent. From the standpoint of the tenant a given piece of land would be neither more nor less desirable on account of the tax; the landlord could collect neither more nor less rent and would have to bear the burden of the tax.

But, on the other hand, the fact that the landlord must bear the tax makes land a less desirable kind of property to own after the tax is levied than before. This will so diminish the demand for land as property as to reduce its selling value and enable the future purchaser to shift the future taxes upon the present owner. In other words, the latter must bear the

whole of the future taxes, so far as they can be foreseen.[1] If a certain tax is levied, and it is expected that it will continue to be levied indefinitely in the future, it will reduce the selling value of the land to the amount of the capitalized value of the tax. The future owner will therefore be able to buy it so much cheaper that he will realize as large a percentage on his investment as though the tax had never been levied. Our conclusions are that a tax on the rental value of land cannot reduce the supply and, therefore, cannot raise its rent. Consequently the owner of the land at the time the tax is first levied cannot shift the burden at all, but such a tax will reduce the demand for land as property and will consequently lower its selling price. Therefore the subsequent purchaser will be able to shift the tax upon the one who owned the land at the time the tax was first levied.

If, however, the tax is specific, and the land is taxed at so much an acre without regard to its value, it is almost certain that some of the poorer land will not be worth the taxes. Where this is the case it will be abandoned and thrown out of cultivation. The resulting diminution in the supply of the products of land will increase their price and enable the owners of the better qualities of land to collect a larger rent. They will thus be able to shift a portion of the tax upon the consumers of the products of the land.

Those products of human industry which cannot now be reproduced form a small and unimportant class which includes rare old coins, curios, and works of art. A universal, or world-wide, tax would affect them in precisely the same way that it would land; but since they are movable and land is not, a local tax would affect them differently. A local tax on such articles would have so little effect on their general market price that the future purchaser could not have the opportunity of escaping the burden by shifting it upon the present owner.

The supply of monopoly products is limited more or less arbitrarily by the will of the monopoly, whose general tend-

[1] See Seligman on the "Shifting and Incidence of Taxation," pp. 52–62, for a historical and critical examination of the theory.

ency is to fix the price of its product at the point that will yield the largest net return and to limit the supply to such an amount as can be sold at that price. A tax on the product would necessitate a new calculation of expenses and profits and a new adjustment of prices and production to suit the new conditions. The price that had yielded the largest net profit before a tax was put upon the product would seldom or never yield the largest net profit afterwards. A higher price and smaller product would ordinarily give better results. Let us suppose that a certain article can be produced by a monopoly at a uniform cost of four cents a pound. At this price 2,000,000 pounds could be sold; at four and a half cents, 1,500,000 pounds; at five cents, 1,000,000 pounds; at five and a half cents, 600,000 pounds; at six cents, 400,000 pounds; and at six and a half cents, 200,000 pounds. Clearly the monopoly would prefer to put the price at five cents and limit the production to 1,000,000 pounds. But if a tax of one-half cent a pound were added to the expense, a larger net profit would remain if the price were put at five and a half or six cents and the production limited to 600,000 or 400,000 pounds. Therefore, if a monopoly is taxed in proportion to its gross product it will shift the tax, in part at least, by charging higher prices for its product.

If the monopoly is taxed in proportion to its net profits, or if it is taxed a lump sum regardless of either profits or production, it will have to bear the burden of the tax. In neither case could the monopoly gain anything by reducing the amount of its production. Such a tax would not change the conditions which determine the net profits of the business.

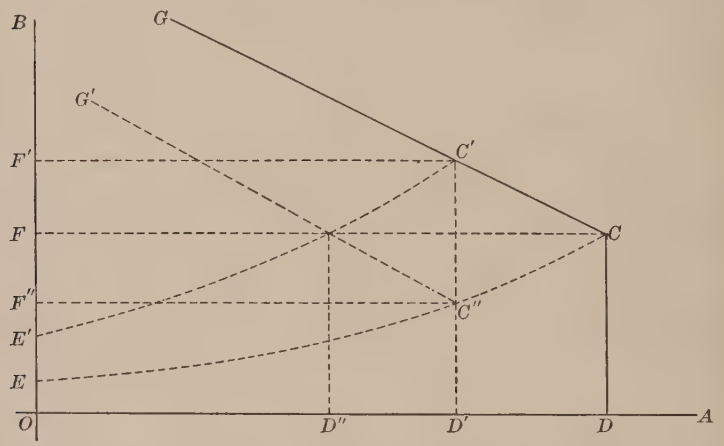
The supply of commodities that are produced under competitive conditions is not fixed by nature nor by the arbitrary will of a monopoly. The tendency is for the supply to increase until the price falls to a level with the cost of producing the most expensive increment. If the cost were greater the production would be checked sooner, and there would be a smaller supply, which would command a higher price. If the cost were

lower the production would be checked later, and there would be a larger supply, which would have to sell at a lower price. The effect of a tax on the production of an article of this class would be the same as an addition to the cost of production. If the same amount continued to be produced after as before the tax was added, it would have to sell at the same price, and some of the more expensive increments would then be produced at a loss. But this fact alone would make it certain that some of the former producers would be driven out of the business, and if it were an industry of diminishing returns[1] this would result in a smaller supply and a higher price. Those who remain in the business and continue to pay the tax would thus be able to shift a part of the burden upon the consumers of the article. But if, on the other hand, the tax were collected directly from the consumer rather than from the producer of the article, it would make no material difference in the distribution of the burden. Such a tax would make the article a less desirable possession and would, therefore, diminish the demand for it. This diminution in the demand would lower the price and shift a part of the burden back upon the producer. This may be illustrated by the diagram on page 638.

Let us suppose that the supply of a certain article is measured along the line *OA*, and its value and cost of production along the line *OB*. Let *GC* represent the demand curve and *EC* the cost curve; in other words, let us suppose that the price that could be had for any definite supply of the article is represented by the perpendicular distance from the point on *OA* which marks the limit of the supply to the curve *GC*, and that the perpendicular distance from the same point on *OA* to the

[1] It is quite conceivable that a tax on an industry of increasing returns might simply drive some of the weaker competitors out of the business and enable the survivors to produce on a larger scale and, consequently, more cheaply. They might even be able to sell the product at the original price, being reimbursed for the tax by the reduction in the cost of production. In the absence, however, of satisfactory data this is only a tentative conclusion. But where the tax falls on only a part of the competitors, as in the case of an import duty on an article that is also produced at home under the law of increasing returns, the case is clearer. This will be discussed later.

curve *EC* represents the cost of producing the most expensive increment of the supply. Obviously, the tendency will be for the supply to increase to an amount represented by *OD*, where it would be checked, because a further production would involve a loss. When the supply is represented by *OD* the price would be represented by *OF*. But if a tax equal to *EE'* were



laid upon the production of the article it would have the effect of raising the cost curve from *EC* to *E'C'*. This, in turn, would have the effect of checking production and limiting the supply to an amount represented by *OD'*, and this supply would sell at a price represented by *OF'*. This would shift a part of the tax upon the consumer.

But if the taxes were collected from the consumer, instead of the producer, it would lower the demand curve from *GC* to *G'C'*, check the supply at *OD'*, and reduce the price to *OF''*. This would shift a part of the tax back upon the producer. If, however, the tax were collected equally from the producer and consumer the supply would be reduced to *OD''*; but the price would not be materially changed. We have still to consider the case of a tax which is collected upon an article in some ad-

vanced stage of its production or while it is in the hands of the merchant or importer. This will be taken up later.

According to the foregoing illustration, only a part of the tax is shifted in either case; that is, whether it is originally collected from the consumer or from the producer, what the effect of the tax will be upon the price of the thing taxed depends upon two conditions: (1) the elasticity of the demand for the article and (2) the amount of rent which its production affords in proportion to the cost. If, as is the case with commodities for which there are many substitutes, the demand is highly elastic it means that a comparatively slight change in the price will occasion a considerable change in the amount consumed. This gives the consumer a decided advantage in the struggle to shift taxes. Other things being equal, the consumer will bear a smaller share of the burden when the demand for the thing taxed is elastic than when it is inelastic. When the demand is elastic the only condition upon which he will use the thing at all, or in anything like the usual quantities, is that it shall cost him no extra expense. An attempt to make the consumer bear the burden of the tax would result in a greatly diminished consumption. Consequently the producer must either bear the tax or go out of business. But if the demand is inelastic, as is the case with commodities for which there are few substitutes, the producer has the advantage. Other things being equal, the consumer will have to bear a larger share of the tax than he would if the demand were elastic. The additional expense of the tax would not occasion any considerable falling off in the amount consumed.

On the other hand, the elasticity of the production or the supply depends upon the extent to which rent enters into the production of the article in question. If very little rent is afforded, it is because there is very little difference in the cost of producing different increments of the supply. If all increments are produced at about a uniform cost which approximates very closely to the market price, any addition to

the current cost or any subtraction from the current price would occasion a considerable falling off in the amount produced. Unless the producers could shift a tax they would stop producing rather than pay it. So the consumer would have to bear a large share of the tax or do without the product. But if the production of the article in question affords a large share of rent, it is because there is a considerable difference in the cost of producing different increments of the supply. Where this is the case an addition to the cost or a subtraction from the price will occasion a comparatively small diminution in the supply. The effects of a tax would be only to cause a small diminution in the supply, and the consumer would have the advantage.[1] Other things being equal, the consumer will bear a larger share of the tax when the production of the thing taxed affords a small amount of rent than when it affords a large amount. For convenience in the following discussion let us agree to use the term "elasticity of production or supply" to mean the extent to which a fluctuation in the value or the cost of production will affect the amount produced. Thus the production of a given article is highly elastic when a comparatively slight addition to the price or subtraction from the cost will occasion a considerable increase in the amount produced, and a comparatively slight addition to the cost or subtraction from the price will occasion a considerable decrease in the amount produced. When the opposite conditions obtain, the production is inelastic. Then we can lay it down as a general principle that the distribution of the burden of any particular tax on the products of competitive industries depends upon the comparative elasticity of the demand and the supply of the thing taxed.[2] If the demand is more elastic than the supply, the consumer will bear a small share of the tax; but if the

[1] The probabilities are that the tax will come out of the landlord's rent.

[2] It has seemed expedient to avoid the use of such terms as "consumer's rent," but to those who are familiar with that term it will readily occur that the elasticity of demand depends upon the amount of the consumer's rent which the commodity affords, just as the elasticity of supply depends upon the amount of producer's rent.

supply is more elastic than the demand, the consumer will bear a large proportion.

We are now in a position to consider the case of a tax that is placed upon an article in some advanced stage of its production or while it is in the hands of the merchant or importer on its way from the producer to the consumer. These advanced processes of production are the ones which, in general, produce the least rent and are affected most by changes in cost or value. Therefore it is safe to conclude that such taxes are most certain to be shifted. The margin of profit which merchants, for example, make upon a given commodity of this class is so small and so nearly uniform that a tax upon that commodity would almost certainly cause them to stop handling it unless they could shift the tax. The question is, Will they shift it forward upon the consumer in the form of a higher price for the finished product or will they shift it backward upon the producer of the raw material by paying him a lower price? It is evident that the burden will be shifted in the direction of the least resistance. If the demand for the finished product is more elastic than the supply, the consumer has power to resist effectively the attempt to shift the burden upon him; but if the supply is more elastic, the producer has the greater power of resistance. Therefore we conclude that the principle of the comparative elasticity of demand and supply, as determining the distribution of the burden of taxation between producer and consumer, applies to this as well as to other cases.

A tariff duty on imported commodities is no exception to the general rule that a tax can affect the value of the thing taxed only when it changes the relation of demand to supply. Since a tariff duty could scarcely be expected to add anything to the demand for the thing taxed, we must conclude that it must diminish the supply in the home market if it is to be added to the price. In other words, the tariff cannot be shifted upon the home consumer unless the effect of the tariff is to reduce the supply of the article in the home market. The question is, Under what conditions will a tariff duty on an imported com-

modity occasion a diminution in the supply of the article in the home market? Let us divide imported commodities into the following classes: (1) those which cannot be produced at home at existing prices; (2) those which are produced at home at existing prices, but whose production is subject to the law of diminishing returns; (3) those which are produced at home under the law of increasing returns.

Any commodity which is produced for a world-wide market tends to be distributed among different sections and political divisions in such proportions that the producer will realize as much net profit on that portion which is sent to one section as that which goes to another. If at a given time a larger net profit is generally realized on what is sent to one section than on what is sent to another, manifestly the producers, if they find it out, will begin sending more to one section and less to the other until the price is so reduced in the first and increased in the second that the profits will be equalized. If a certain country levied an import duty upon the commodity in question, and if its price within that country were to remain the same as before, it would reduce the profit to the foreign producer upon that part of the product which is sent to that country. Less would therefore be sent there and more to other countries until the equilibrium was again restored by the creation of a new equilibrium price somewhat higher than the old one. This diminution in the amount sent to the tariff country would raise the price there unless the domestic product increased sufficiently to counterbalance the diminution in the amount imported. But if it should so happen that the import duty should occasion such an increase in the domestic product as to counterbalance the diminution in the amount imported, then no rise in the price would result, and the home consumer would not have to bear the burden of the duty.[1]

Under what conditions will the domestic product be increased by the import duty sufficiently to counterbalance the diminution

[1] This, of course, overlooks local conditions which sometimes exist on the border of the tariff country.

in the amount imported? The utility of the above classification will now appear. If the duty is levied upon a commodity which cannot be produced at home at the existing price, manifestly the home production could not increase sufficiently to keep the price from rising. The only condition under which it can be produced at home at all is that the price shall rise sufficiently to cover the cost of producing it under the unfavorable domestic conditions. In such a case the whole of the duty is almost certain to be added to the price. If the commodity is one which is produced at home, but under the law of diminishing returns, the results will differ only in degree, if at all. The price is certain to rise because the amount imported will diminish, and the domestic product cannot materially increase without a rise in price.[1] The conditions are essentially the same as those illustrated in the diagram on page 638. We are safe in assuming that the domestic product has already increased as far as it could increase profitably at the existing price. Since it is an industry of diminishing returns, a larger production would involve a higher cost. Poorer land, poorer labor, poor managing ability, or all combined would have to be called into use, or each existing establishment would have to be operated more extensively and, consequently, at a greater cost per unit of product.

Here, again, we may apply the principle of the comparative elasticity of demand and supply to determine the extent to which such a tax would affect the price, but it must be applied in a somewhat special manner. Paradoxical as it may seem at first, yet it is true that the more elasticity there is in that part of the supply which is produced at home, the less elastic will be the whole supply. In other words, the more readily the home production will respond to a slight rise in price, the less an import duty will affect the whole supply on the home market. The reason is plain. If a slight rise in the price of the

[1] It is needless to say that this can apply only to commodities which are imported in commercial quantities. It could not apply, for example, to a duty on corn and pork in this country; wool might serve as an example.

article will occasion a large increase in the amount produced at home, the home production will come nearer to an increase sufficient to offset the falling off in the amount imported. That is, the total supply on the home market will be inelastic. This will give the consumer an advantage in the matter of shifting a tariff duty. He will likewise have an advantage if the commodity is one for which the demand is elastic.

If the duty is levied upon a commodity which is produced at home under the law of increasing returns, the result is still worse for the foreign producer and correspondingly better for the home consumer. A diminution in the amount imported will open a larger market to the home producer and may enable him to produce more cheaply, because on a larger scale. Where this holds true the increase in the domestic product may be more than enough to counterbalance the diminution in the amount imported and actually increase the total supply on the home market. In such a case the consumer would have to bear no part of the duty. There are two possible exceptions to this conclusion. The first is that an industry of increasing returns always tends to be a monopoly. Where such is the case the monopoly will doubtless succeed in putting up the price after foreign competition is virtually shut out by the import duty. But while there is doubtless a tendency for industries of increasing returns to *become* monopolies, it can scarcely be maintained that all such industries *are* monopolies. The second exception is that after the import duty had resulted in the enlargement of domestic industries and consequent cheapened production the price might be still further reduced by removing the duty, and that consequently the consumers will be sharing the burden of the duty in that they would buy the article more cheaply if the duty were removed. While this might be temporarily true, it is probable that the same forces which kept the price up before the duty was first levied would ultimately bring about the same conditions after the duty had been removed.

CHAPTER XLVIII

THE MINIMUM SACRIFICE THEORY OF TAXATION[1]

If taxes were voluntary contributions for the support of the state, it would be important that we should recognize some principle by which to determine how much each individual ought to give. Since the payment of such a tax and its amount would be matters for the individual conscience, it would be pertinent to ask what principle of obligation the individual ought to adopt as his rule of action. But since taxes are not voluntary contributions but forced payments, we need to know not so much what the social obligation of the individual is as what the social obligation of the state is,—not how much the individual ought in harmony with his social obligation to give, but how much the state ought in harmony with its own obligation to take from him and under what conditions to take it. In the matter of taxation the state alone is the voluntary agent, and consequently the social obligation of the state alone is to be determined. It is one thing to say that the individual ought to contribute to the support of the state in proportion to the benefit which he receives, or to his ability to pay, or to his faculty, but it is quite another thing to say that the state ought to make him do any of these things.

These two questions, though distinct, may be resolved into one by assuming that it is the duty of the state to make its citizens do whatever they ought in conscience to do. It would still be the duty of the state which would have to be determined, but under such an assumption that duty would be clear whenever we had found out how the individual ought to act. Such

[1] The substance of this chapter was published in the *Political Science Quarterly*, Vol. XIX, No. 1 (March, 1904).

was the assumption upon which states acted in an earlier and darker age, but it has generally been abandoned except in discussions of the basis of taxation, and it is time that it should be abandoned even here.

It is not necessarily the duty of the state to make the individual do whatever he ought to do. In many cases it would cost more than it is worth. In some cases, of course, the state ought to make the individual do whatever his duty requires, as to refrain from violence and fraud, to pay a debt, or to keep a contract. In these cases it is so important that the individual should do what his duty requires as to more than pay the cost of compelling him to do so. But there are many other cases where the duty of the state has to be determined on other grounds, largely because the state's efforts at compulsion would do more harm than allowing the individual to ignore his duty. It may be that each citizen ought to contribute to the support of the Church "according as the Lord hath prospered him," but none of the more advanced nations would think of trying to compel him to do so. It may be the duty of each laborer to join a union, but no state ought to force him into one,—much less ought the union to be allowed to appropriate that prerogative of sovereignty to itself. It may be and very likely is the duty of each individual "to produce according to his ability and consume according to his needs," but no one but a socialist would claim that the state ought to try to make him do so. To succeed in this would require omniscience and omnipotence, and the state possesses neither. It is obviously no one's duty to try to do that which he is manifestly incapable of doing. This applies to states as well as to individuals. The illustrations might be multiplied, but enough has been said to show that there are no a priori reasons for assuming that because the individual ought to pay for the support of the state according to his ability, for example, that it is therefore the state's duty to make him do so. All the results of such efforts at compulsion must be weighed in the balance before deciding to undertake it.

It is not to be inferred that the question of taxation is entirely divorced from social utility. Neither is it to be inferred that there are two kinds of social obligation—one for the individual and the other for the state—nor that the ultimate test of social obligation is not the same for the one as for the other. A very distinct problem is involved in the question of the apportionment of taxes; namely, What ought the state to do in the matter? Moreover, there is only one kind of social obligation; and the same test of action, whatever that test may be, must be applied in determining the duties of both the individual and the state. But even when a general principle of obligation has been agreed upon, no one is in a position to decide upon the specific duty of either the individual or the state until he knows what would be the general economic consequences of their various possible acts. Recognizing that each act is, for his purposes, the first link in a chain of causation, he must be able to trace that chain from its initial act to its general results before he can tell whether or not the act in question conforms to his general principle. As applied to taxation, for example, he must know how the effort to collect a certain tax will affect industries and morals and other social interests before he can say whether the state, in levying the tax, would be acting in harmony with the general principle of obligation agreed upon. If, to be more specific, he should find that the attempt to collect a certain tax would discourage certain desirable industries and commendable enterprises, that would be at least a partial reason for condemning it. That is to say, if the industry which is suppressed meets the test of the ethical principle, the tax which suppresses that industry cannot possibly meet the same test.

Let us accept, for purposes of this discussion, the principle of utility and assume that the state, as well as the individual, ought to promote the general welfare—or the greatest good to the greatest number. How can the state promote the general welfare in the matter of taxation? In discussing its duty the author cherishes no illusions as to the nature of the state.

Realizing that the latter is merely an abstraction—a convenient name for certain forms of joint action on the part of a multitude of individuals—and that it can have no duties separate and apart from those of the individuals who compose it, yet the duty of the individual in imposing his will upon other individuals through legislation is so distinct from his duty in other matters that it is much more convenient, and fully as accurate, to speak of the former class of duties as if they belonged to the state itself.

The question of the duty of the state in matters of taxation is, of course, to be kept distinct from the question of its duty in the expenditure of revenue after it is raised. By the expenditure of a given revenue the state may in various ways add positively to the general welfare but it may not be so obvious how it can do this merely by collecting revenue. There are certain ways of collecting revenue which are generally believed —and no doubt correctly—to promote well-being at least in a negative way. When, for example, a tax or a license suppresses or holds in check an industry which is regarded as more or less deleterious, such a tax or license meets the utilitarian test and is therefore justified. Writers on taxation generally (even those who uphold the benefit theory or the faculty theory) accept this as a justification, even though it does not conform to their special canon of justice. But if the general utilitarian principle, or the general-welfare argument, can in this special case override their special canon, why may it not in other cases as well? It is at least an admission that the general utilitarian test is a more fundamental one than that represented by their special canon. If so, the more fundamental test ought to be applied in all cases.

While, as already suggested, there are certain taxes whose collection adds to the public welfare by suppressing undesirable industries, yet, generally speaking, the collection of a tax is in itself an evil. It is the cost which we have to undergo for the advantages which may be secured by means of the revenue after it is collected. Since a tax is, speaking thus generally, an

evil, a burden, a sacrifice imposed, it is obvious that the utilitarian principle requires that that evil, that burden, that sacrifice, shall be as small as possible in proportion to the revenue secured. When the taxes are so levied and collected as to impose the minimum of sacrifice and the revenue is so expended as to confer the maximum of advantage, or when the surplus of advantage over sacrifice, of good over evil, is at its maximum, the state has fulfilled its obligation completely—it has met the utilitarian test.

If it be once admitted that the state's obligation in the matter of taxation is to be determined on the basis of a broad principle of public utility, then it is apparent that the argument in favor of either the benefit theory or the faculty theory must be reconstructed. Instead of basing the argument upon the duty of the individual, as is usually done,[1] the upholder of either of these theories must show that if the state should apportion taxes according to benefits received, in the one case, or according to ability to contribute, in the other, such apportionment would impose the least burden, all things considered. This is possibly the subconscious basis of the arguments of those writers who have championed either of these theories, but it does not seem to have been explicitly recognized by any of them. The champion of the faculty theory, for example, may conceivably have reasoned somewhat as follows:

Major premise. The burdens of taxation ought to be so distributed as to involve the least possible sacrifice on the part of the community as a whole.

Minor premise. When each individual contributes in proportion to his ability, the whole burden of taxation is most easily borne; that is, with the minimum of sacrifice.

Conclusion. It is the individual's duty so to contribute.

Granting the premises, the conclusion follows as a matter of course, so far as the individual's duty is concerned; but, as we shall see later, the minor premise is not sound and, as we have

[1] If such is not the argument, then the leading expounders of these theories are at least guilty of inaccurately expressing their views.

already seen, the conclusion is not conclusive so far as the duty of the state is concerned. For whatever might be true if all men were willing to contribute according to their ability, the fact is that they are not willing so to do. Being unwilling, they will resort to various methods of avoiding such contribution. The attempt of the state to compel them to contribute according to their ability will not be without injurious results: it will cause various changes in the direction of business enterprise. One of the ways of avoiding the necessity of paying a tax is to avoid the occasion which the assessor, acting under the law, seizes upon as a pretext for collecting a sum of money. If, for example, the possession of a certain kind of property offer such an occasion, men will tend, within certain limits, to avoid the possession of that kind of property. In so far as men generally try to avoid the possession of such property or to avoid the other occasions for which the assessor is on the lookout, in so far, when a new tax is levied, are industry and enterprise disturbed and forced to readjust themselves to the new pressure. These disturbances and readjustments may be more or less injurious or more or less beneficial. If some taxes are to be approved because they repress certain undesirable industries, others must, by the same reasoning, be condemned because they repress desirable industries. Since almost every tax has some effect in determining the direction of business enterprise, it is obvious that some consideration of these results of the state's action must enter into the determination of its duty. The matter is therefore not settled when we have found out what the individual ought to do.

By an argument precisely similar to that in favor of the faculty theory of taxation, though somewhat sounder, the socialist could support his claim that the state ought to assume the direction of all industry and apportion to each individual his work and his income.

Major premise. The individual ought to work for the economic welfare of the whole people.

Minor premise. If each individual would voluntarily work according to his ability and consume according to his needs, the economic welfare would be promoted in the highest degree.

Conclusion. It is the duty of every individual to produce according to his ability and consume according to his needs.

Both the premises are probably sound, and if so the conclusion follows as a matter of course; but, like the former contention, the argument is inconclusive when applied to the question in hand, which is, What ought the *state* to do? This question is complicated in both cases by the fact that individuals are not willing to do what the conclusion points out as their logical duty, and that they will therefore adopt methods of avoiding such necessity if the state should attempt to impose it upon them. Such an attempt would therefore produce unlooked-for and, it is generally conceded, highly undesirable consequences. All this amounts to saying that it is not the duty of the state to try to do anything which it cannot accomplish or in trying to accomplish which it would work mischief. What is here affirmed regarding the state is equally true of individuals. It is, for example, in the opinion of the author, highly desirable that all who read this chapter should agree with its conclusions, but even he does not consider it anyone's duty to try to force them to do so—for the simple and sole reason that such an attempt could never succeed, or that, if it did, it would produce other results more undesirable even than disagreement.

McCulloch alone among the leading writers on taxation seems to have grasped this fundamental truth when he wrote:

> It would, no doubt, be in various respects desirable that the inhabitants of a country should contribute to the support of its government in proportion to their means. This is obviously, however, a matter of secondary importance. It is the business of the legislator to look at the practical influence of different taxes, and to resort in preference to those by which the revenue may be raised with the least inconvenience. Should the taxes least adverse to the public interests fall on the contributors according to their respective abilities,

it will be an additional recommendation in their favor. But the *salus populi* is in this, as it should be in every similar matter, the prime consideration; and the tax which is best fitted to promote, or least opposed to, this great end, though it may not press quite equally on different orders of society, is to be preferred to a more equal but otherwise less advantageous tax.

. . . The distinguishing characteristic of the best tax is, not that it is most nearly proportioned to the means of individuals, but that it is easily assessed and collected, and is, at the same time, most conducive, all things considered, to the public interests.[1]

Far from ignoring all ethical considerations, as Bastable suggests,[2] this is a distinct recognition of an ethical principle more definite and more fundamental than any which Bastable himself recognizes in his discussion or shows any signs of being aware of.

Leaving out of consideration for the present all benefits which the levying and collecting of a tax may confer, such as the suppression of an undesirable industry or the deepening of the taxpayer's interest in the affairs of the state, let us turn our attention to the sacrifices involved. There is, of course, to be considered the direct sacrifice on the part of him who pays a tax. Having his income curtailed by the amount of the tax, his power to consume wealth or to enjoy the use of it is correspondingly reduced. This form of sacrifice is the most prominent and has, naturally enough, generally appealed most strongly to writers on taxation. But there is also another form of sacrifice quite as important and fully as worthy of attention. Any tax which represses a desirable industry or form of activity not only imposes a burden on him who pays it but also upon those who are deprived of the services or the products of the repressed industry. Taxes should therefore be apportioned in such a way as to impose the smallest sum total of sacrifice of these two kinds.

While it is essential that both forms of sacrifice should be considered before reaching any final conclusion as to the best

[1] Taxation and the Funding System, p. 19. London, 1845.
[2] Public Finance, p. 314. London and New York, 1895.

system of taxation, nevertheless the preliminary discussion may be facilitated by first treating them separately. If one were to consider only the first and more direct form of sacrifice, with a view to determining how the total burden of this kind could be reduced to a minimum, he would be driven to conclude in favor of a highly progressive rate of taxation on incomes, with a somewhat higher rate on incomes derived from more permanent sources, such as secure investments, than upon incomes from insecure sources, such as salaries. From the gross income which comes to him in the form of a salary the recipient must make certain deductions in the way of insurance premiums, for example, to provide for the future, before he is on a level, in point of well-being, with one whose net income comes to him from a permanent investment. The man with a salary of five thousand dollars would be no better off than another with an income of four thousand from a permanent investment, if the former should have to spend one thousand dollars of his salary in life-insurance premiums in order to provide as well for his family as the latter's family would be provided for by the investment itself. Under these conditions the sacrifice involved in the payment of an equal amount to the state would be equal, though the nominal incomes are unequal.

Leaving such matters out of consideration, a highly progressive rate of taxation would be necessary in order to secure the minimum of sacrifice, and for the following reasons. In the first place, a dollar is worth less, generally speaking, to a man with a large income than to a man with a small income, and a dollar taken from the former imposes a smaller sacrifice than a dollar taken from the latter. Moreover, if after the first dollar is taken from the first man his income is still greater than that of the second man, the taking of a second dollar will occasion him less sacrifice than would the taking of a first dollar from the second man; so that if only two dollars were to be raised they should both be taken from the first man. Applying this principle rigorously we should continue taxing the largest income until it is reduced to such a level that the first dollar of

the remaining income is worth as much to its owner as the first dollar of the next largest income is worth to its owner, and then only should we begin to tax the latter at all. Then the two should be taxed until they are reduced to a similar level with respect to the third largest, before the third largest is taxed at all, and so on until a sufficient revenue is raised.[1]

Such an application of the principle involves the assumption that wants are equal, which, though obviously not true, approximates more nearly to the truth than any other working assumption that could possibly be invented. Since the state must collect a revenue, it must have some definite assumption upon which it can proceed. The question is not, therefore, whether men's wants are equal, but whether there is any rule of inequality of wants upon which the apportionment of taxes could be made with a nearer approximation to the truth. If there be such a rule, it has not yet been discovered. To assume, for example, that the man whose income is greater than five thousand has correspondingly greater wants than the man whose income is less than five thousand would be obviously unsafe, because there are even chances that the opposite would be true. Where the chances are even on both sides it is safer to assume equality. Of a given number of men of the same age and the same general standard of health (by way of illustration) it is obviously untrue to assume that they will all live the same number of years, yet it is nearer the truth to assume that than any other definite workable principle. Consequently the life-insurance company acts justly when it assumes that they will live the same number of years and apportions their premiums accordingly.

This in no way ignores the fact that wants expand with the opportunity of gratifying them. This objection, however, could only apply at the time when the tax was first imposed. At such a time it would doubtless be true that the five-thousandth dollar taken from a man with an income of ten thousand would occa-

[1] For a fuller discussion of this point see an article by the author on "The Ethical Basis of Distribution and its Application to Taxation," in the *Annals of the American Academy of Political and Social Science*, July, 1895.

sion him a greater sacrifice than the taking of the first dollar from an income of five thousand dollars would occasion its owner. But the reasons for this are twofold. In the first place, by taxing the first man so heavily the state would be depriving him of so many things which he was accustomed to enjoying that by the time the five-thousandth dollar was reached, the taking of each particular dollar would be keenly felt. The last dollar of his remaining income would represent a greater utility to him than would the last dollar of the five-thousand-dollar income to its owner. In the second place, by taxing the second man so lightly as compared with his present taxes the state would be allowing him to consume some things to which he had not become accustomed. The taking of the particular dollar in question would not involve a very high sacrifice, for the reason that it would deprive him only of some enjoyment which had not yet entered into his standard of living. But both these reasons would disappear after the new tax had been in operation for a generation, or long enough to bring the standards of living of the two men to the same level.

Drastic as this method of taxation would be, yet, the writer contends, this is the method which would be logically forced upon us if we should adopt the utilitarian test and should, in applying it, have regard only to the direct sacrifice on the part of those who pay the taxes, ignoring the indirect forms of sacrifice which a system of taxation inevitably imposes. John Stuart Mill, who advocated equality of sacrifice as the rule of justice in taxation, was guilty of faulty reasoning on this point, doubtless because he had not made the analysis which subsequent writers have made into the nature of wants and their satisfaction. He was too good a utilitarian to advocate equality of sacrifice if he did not believe that it would involve the least sacrifice on the whole. This is shown by the following quotation, the italics of which are mine.

> For what reason ought equality to be the rule in matters of taxation? For the reason that it ought to be so in all affairs of government. As a government ought to make no distinction of persons or

classes in the strength of their claims on it, whatever sacrifice it requires from them should be made to bear as nearly as possible with the same pressure upon all, *which, it must be observed, is the mode by which the least sacrifice is occasioned on the whole.* If anyone bears less than his fair share of the burden, some other person must suffer more than his share, and the alleviation to the one is not, *cæteris paribus*, so great a good to him as the increased pressure upon another is an evil.[1]

The last proposition in the above quotation would be true only of persons whose incomes were approximately equal. If A's income is twice as great as B's, or, to state it more accurately, if A's income were enough greater than B's so that a dollar is worth half as much to A as it is to B, then equality of sacrifice would be secured by making A pay twice as many dollars as B: by collecting $100, for example, from A and $50 from B. But the last dollar of A's remaining income would still be worth less to A than the last dollar of B's remaining income is worth to B, and the last dollar taken from A would occasion him less sacrifice than the last dollar taken from B has occasioned him. Then by taking more than $100, say $110, from A, and less than $50, say $40, from B the same revenue would be raised with a smaller sum total of sacrifice, for the gain to B by this change would be greater than the loss to A. This will appear at once to anyone who at all understands the principle of marginal utility. The only conclusion one can draw is that the smallest sum total of dissatisfaction is secured not by equality of sacrifice but by equality of *marginal* sacrifice. Equality of marginal sacrifice would be secured by so apportioning taxes that, as a general rule, the last dollar collected from one man should impose the same sacrifice as the last dollar collected from any other man, though the total amount collected from each man might impose very unequal total sacrifices.

We are now in a position to test the validity of the minor premise in the argument on page 651; namely, if each individual would voluntarily contribute in proportion to his ability,

[1] Principles of Political Economy, Bk. V, chap. ii, § 2.

the whole burden of taxation could be most easily borne—that is, with the minimum of sacrifice. If one's ability is assumed to be measured by one's income, real and potential, and to vary with that income, then the minimum of sacrifice would not be secured by each one's paying according to his ability. If the rich would volunteer to pay more than in proportion to their ability, the burden would be more easily borne—that is, with less sacrifice—than if all should pay proportionally. As a statement of individual obligation, even, the faculty theory is untenable, unless modified and defined more rigidly than has yet been done. From the strictly utilitarian standpoint the individual who measures his obligation to society by his total income is less to be commended than the individual who determines whether he has fulfilled his social obligations by considering not how much he has given but how much he has left. The latter type of individual is well illustrated by the example of that religious and philanthropic leader who found, early in life, that he could live in comfort and maintain his maximum efficiency by the expenditure of a certain small income. Later in life, as his income increased, he continued living on his earlier income, devoting all his surplus to the service of society. This is mentioned merely by way of further elucidation of the proposition that if there were no indirect consequences of the attempt to collect taxes the utilitarian test would require an enormously high rate of progression in the apportionment of taxes, and that if the state were able to apportion and collect taxes on this basis it would only be making individuals do what they ought to do voluntarily.

But there are indirect results, the most important of which is, as already pointed out, the repression of certain desirable industries and enterprises. The importance of this consideration becomes apparent when we reflect on the probable consequence of a system of taxation so drastically progressive as that suggested above. If a large share of one's income above a certain sum should be seized by the tax collector, it would tend to discourage the effort to increase one's income beyond that

sum. In so far as this reduced the energy of the individual in business or professional life, the community would be deprived of his services. This deprivation would be a burden on the people, all the more regrettable because it would not enrich the public treasury in the least.[1]

Such considerations become still more important when we come to the discussion of various forms of taxation, especially the taxation of various kinds of property. Since different kinds of property come into existence in different ways, taxes must affect them differently. A kind of property which is produced by labor, or comes into being as the result of enterprise, may be very seriously affected by a tax. Tax the makers of it and they will be less willing to make it. Tax the owners or users of it and they will be less willing to own or to use it; they will therefore pay less for it, and thus discourage the makers of it as effectively as if the latter had to pay the tax themselves. In either case there will be less of that kind of property made and used, and some members of the community who would otherwise have enjoyed the use of it will now be deprived of that use. This is a burden to them, and, moreover, a burden which in no way adds revenue to the state. Such a tax is repressive. On the other hand, a kind of property whose existence does not depend upon individual labor or enterprise will be less affected by a tax. Tax the owner of a piece of land and, while you make him less anxious to own it, you will not cause him to abandon it. While you lower its price, you do not reduce the amount of land nor deprive the community of the use and enjoyment of anything which it would otherwise have had. Such a tax is not repressive.

As a general proposition it is safe to say that, other things being equal, a tax which represses desirable enterprises or activities, and thus deprives the community of the use and enjoyment of certain desirable goods, is more burdensome in proportion to

[1] See also Ross, "A New Canon of Taxation," *Political Science Quarterly*, Vol. VII, p. 585.

the revenue raised than a tax which does not entail such results; in other words, a repressive tax is more burdensome than a nonrepressive tax. A proposition much more to the point is that a tax on any form of property or income which comes into being as the result of the productive industry or enterprise of its owner is more repressive than a tax on any form of property or income which does not so come into being. By productive industry and enterprise is meant such industry and enterprise as adds something in the way of utility to the community and not such as merely costs something to its possessor. Skill in buying land may cost as much study and care as skill in making shoes; but whereas those who exercise the latter kind of skill increase the number of shoes, it has never been shown that those who exercise the former kind add anything whatever to the community's stock of useful goods. Tax shoe factories and, in so far as it represses the industry, the community will have fewer shoes; tax the land and the community will not have less of anything than it would have without the tax. What is said of a tax on land could also be said, within limits, of a tax on inheritances. From the standpoint of nonrepressive taxation, therefore, both the land tax and the inheritance tax have much to be said in their favor.

Anyone who is familiar with the subject of the shifting and incidence of taxation will see at once that there is a close connection between the repressive effects of a tax and the shifting of it. A tax can be shifted, generally speaking, only when it affects the demand for or the supply of, and consequently the value of, the thing taxed. The more easily a tax affects the supply or demand, the more easily it is shifted. One which does either of these things is repressive: it affects supply by repressing production; it affects demand by repressing consumption. A careful analysis of the conditions under which taxes may be shifted is, therefore, very much to be desired.[1]

[1] For an attempt in this direction see the author's article on "The Shifting of Taxes," *Yale Review*, 1896. See also Seligman's "Shifting and Incidence of Taxation" for a brilliant survey of the earlier attempts.

Such an analysis would enable us to form conclusions as to the repressive or nonrepressive effects of various taxes.

As applied to incomes in general, without regard to their source, a progressive, even a highly progressive, tax will occasion, on the whole, less direct sacrifice to the taxpayers than a proportional tax. A progressive tax is therefore to be commended, unless the rate of progression is made so high as to discourage the receivers of large incomes from trying to increase them. If the rate of progression is as high as this, the indirect form of sacrifice, growing out of the repressive effects of the tax, will counteract, wholly or in part, the reduction in the direct form of sacrifice. A moderately progressive income tax would, therefore, seem to be more desirable than a proportional one. But as between different kinds of income and different kinds of property, the preference should be given to those taxes which fall upon natural products, such as land, rather than upon artificially produced goods, and upon increments of wealth which come to an individual through natural causes over which he has no control—inheritances, for instance—rather than upon incomes earned by the individuals themselves. Such taxes are less repressive than most other special forms of taxation and therefore occasion less sacrifice of the indirect kind.

CHAPTER XLIX

THE FINANCING OF A WAR

It is sincerely to be hoped that it will never be necessary to finance another war and that this chapter will therefore have nothing more than an academic interest; but until we have reasonable assurance that wars shall be no more, the problem of financing a war must have a very practical interest.

What is meant by the financing of a war. By the financing of a war is meant the keeping of the National Treasury supplied with money with which to purchase military supplies and pay other war expenses. This problem should be kept distinct from the physical problem of producing supplies and war materials. The latter is a problem not for the financial expert but rather for the industrial engineer, the business manager, or some other expert in the organization and coördination of the factors of physical production. While the financial problem is one of tremendous importance, it is not only less important but also very much less difficult than that of producing the supplies themselves.

Financial problems less difficult than problems of production. Difficult as is the financial problem, all the factors are within the control of the government, or at least of the people behind the government. Consequently, if they fail in their attempts to handle the problem they have only themselves to blame; their failure cannot be laid to the physical difficulties or to factors which lie beyond their own control. In short, the failure will be due to the stupidity of their rulers or of the people who refuse to support a sound financial policy on the part of the rulers. The problem of producing supplies, on the other hand, especially on the part of a beleaguered country, may depend upon factors which lie beyond the control of either govern-

ment or people. For example, the difficulties of the South during the Civil War were on the physical side insuperable, hemmed in, as they were, by blockading fleets and invading armies. On the financial side, however, their difficulties were of their own creation. In other words, the difficulties in the way of supplying themselves with horses, salt, nitrogen, and a number of other necessaries were insuperable, but the difficulties which they, as well as the Northern people, had in finding money with which to pay for such supplies as they could get were within their own control.

In most of our discussions of the problems of war finance too little attention is given to certain large elementary principles. The practical financiers are fully absorbed with the details of the question, and the financial writers in the ephemeral press are more concerned with finding out what the people want them to say, and then saying it, than they are in getting at the root of the problem.

Speeding up the circulation of money. One large economic fact which greatly simplifies the financing of a war is that an increase in the rapidity of the circulation of money has, in all essential particulars, the same effect as an increase in the physical quantity of money. To double the speed of circulation, for example, enables a given quantity of money to do twice as much work. Analogies, though often dangerous, are sometimes useful. A helpful one is found between the circulation of blood in the human system and the circulation of money in the country. When increased muscular exertion calls for larger supplies of blood in the limbs, it is not necessary to increase the total volume—the need is met by speeding up the circulation. But in order that the heart may send increasing quantities of blood per unit of time to those parts where it is demanded, it must have means of getting increased quantities per unit of time back again from the extremities; in other words, the problem of getting the blood back is obviously as important as that of pumping it out to the places where it is needed. The National Treasury is confronted by a similar

problem in time of war. It is called upon to send out money in increasing quantities to pay the enormously increased expenses of the government. In order that it may always have sufficient money to pay out for war supplies at an extraordinary rate, it must find means of recovering it at the same extraordinary rate. Since all the money not actually in the Treasury is in the hands of the people, it is they who must be induced to return it to the Treasury at this extraordinary rate. If the rulers can devise a plan for doing this, and if the people are sufficiently wise, devoted, and loyal to support the plan, there will be no difficulty in the financing of a war. These are two very large ifs.

More money not absolutely necessary. Another large fact of even greater importance is that the country, as distinct from its government, does not need very much more money in time of war than in time of peace, except for the purchase of foreign supplies. So far as its domestic economy is concerned, it needs only a little more. There are not many more men to be hired; there is not much more work which can be done, because there are not many more men to do it; and there are not many more goods to be bought in time of war than in time of peace. The difference is that the government, instead of private individuals, must hire the men and buy the goods. This makes it physically necessary that private individuals should hire fewer men and buy fewer goods.

Private consumption must be cut down. For example, when I am spending my income in time of peace I am merely hiring men to make things for my consumption and to wait upon me. All the men in the country are presumably engaged in producing things for consumers and in waiting upon them; that is, upon one another. In time of war it is necessary that a large number of men stop producing things for private consumption and waiting upon one another as private consumers, and begin to produce things for the government and to wait upon the government and serve it as soldiers. It is physically impossible for them to do this unless private consumers are willing to consume less and to wait upon themselves instead of hiring others

to do so. Moreover, it need not take any more money to hire these men to work for the government than to hire them to work for private consumers.

If, for example, I am spending so much on myself that it takes, in the aggregate, ten men to make things for my consumption and to wait upon me, it will be necessary in time of war for me to live on less, because the government must have some of these ten men. Another way of expressing the same thing would be to say that I need them to work for me in another capacity in time of war; I need them to produce war supplies and to fight in my defense. The government is my agent in hiring these men and directing the fighting; therefore I must turn a part of my income over to my agent, the government, to hire some of these ten men, while I, with the remainder of my income, may hire the rest to continue working for me. What has just been said in the first person singular can be repeated in the first person plural, and thus it will include us all.

The private consumer bids against the government for man power. If we are all left undisturbed in the enjoyment of our income and continue spending it in such a way as to require as many men as before to produce for and to wait upon each of us, while our agent, the government, without taxing us, undertakes to find means to hire the men whom it needs, we shall—each and every one—be competing for these men against our own agent, the government. If the government opens a war chest or gets its money from another source than our incomes, it will have to bid against us to get men to work and fight for it. Literally, it will be trying with a lot of new money to hire them away from us, while we are trying with our full income to hire them away from the government and keep them working for us. Aside from the obvious futility and stupidity of this process, it results in inflation of prices, no matter what the source of the government's money may be.

Taxation enforces economy in private consumption. Here is the first great mistake which almost every government has made, up to the present time, in its efforts to finance a war: it

has hesitated to tax its people. The only sound method of financing a war is to tax the people—and tax them to the bone. Unless the government has a war chest which it can open or unless it issues a lot of new currency, it must get its money from its citizens, in the form either of loans or of taxes. If it does not do one of these things, there is no possibility of avoiding that conflict which has just been described. Leaving the people with their incomes and purchasing power unimpaired will permit them to continue spending their incomes as before, and this expenditure is a demand for men to produce supplies for private consumption and to wait upon the consumers. The only way, then, in which the government can get these men is to outbid with its new money the private consumers. This competition between the private consumers and the government for men and supplies cannot by any possibility result in anything else than an inflation of prices.

Issuing new money a mistake. Even when the government has accumulated a war chest of specie, this money will be used to outbid private consumers for men and supplies, which will result in an inflation of prices. Where the government issues or causes to be issued a lot of new credit currency, in order to avoid taxation, the difficulty is exaggerated, for there is not only an inflation but a grave danger of depreciation.

Contrary to a very widely accepted theory, there may be an inflation without any use whatever of credit currency. This is possible, for example, where a large quantity of standard coin, or metallic money, is injected into the circulation after having been hoarded in the public treasury. The way it gets into circulation at the beginning of a war is through its use by the government in purchasing supplies and hiring men; all the private individuals, with their incomes unaffected, continue purchasing supplies and hiring men as before; and it is this competition of the government, with its new money, against private consumers, with their old money, that starts prices upward and causes inflation. It makes very little difference whether the new money which the government uses in these

purchases is coin which has been hoarded or credit currency which is issued for a special purpose, except where the latter becomes so excessive in quantity as to depreciate in terms of coin.

Individuals must purchase less if the government is to purchase more. The first and fundamental conclusion, therefore, is that in order to avoid inflation the people must purchase less in proportion as the government purchases more. The only way to force them to purchase less is to get their money away from them. This may be done by several methods as follows:

The first method is that of voluntary loans of cash. People who have been spending their money for other things may be induced to spend it for government bonds. They must then cut down their purchases of supplies. This reduces the demand for men to produce supplies for private individuals. These men who are released from general industry are then available to be hired by the money which is now in the hands of the government. This cannot result in inflation except where the government bonds are used as a basis of credit. In this case, the purchaser of a government bond, having lent his money to the government, then turns around and buys on credit, using his bond as security. This results in inflation.

Another method is that of forced loans,—the commandeering of the supplies of money in savings banks and other places of deposit. This is virtually the system of conscription as applied to money. Whatever else may be said against this method, it cannot be said to result in inflation, because the people whose money is taken away have less to spend and therefore they do not compete with the government in hiring men and buying supplies.

Still another method, and the one which ought always to be followed as far as possible, is that of taxation. This is likewise a system of conscription,—the conscription of incomes as distinguished from that of men. It is better than the forced loan because it applies to all incomes and does not penalize those who have shown sufficient frugality and thrift to save and deposit a part of their income instead of consuming it all.

The most futile of all methods is that of issuing temporary credit currency, to be repaid out of war indemnities after a victory. There is, however, one condition under which it may be necessary for the government to have available, in the form either of a war chest or of a credit currency, a new supply of money. It usually takes some months to get the taxing machinery going so as to increase the government's income materially. It may be necessary, in order to tide over these few months, to make use of some extraordinary reservoir of currency. Usually, however, and always if the credit of the government is good, the large sums needed at the beginning of a war can be secured quickly by means of voluntary loans. This is the first and greatest argument in favor of raising money by loans rather than by taxation.

Distributing the burdens of war over several generations. Another argument is that by borrowing the money the financial burdens of the war may be distributed over a longer period than if the money is raised by taxation. It is sometimes said, rather shamelessly it is true, that the people have burdens enough in time of war without having to pay extraordinary taxes. The fact is, however, that those who do not go as soldiers or give their services directly to the government bear no burdens whatever except taxes. Most of them, in fact, prosper in time of war. Many a respectable family is still living on wealth accumulated out of the profits of business during our Civil War, and still more out of the World War, while their neighbors were spending their time in the unremunerative work of the soldier. War is not, in fact, a burden upon the whole generation. It is a burden only upon those who do its work and those who pay its expenses. If war taxes are not increased, many will absolutely escape all war burdens. The question is, therefore, that of distributing the burden not over several generations but over all the individuals of each generation, and distributing it as nearly equally as is humanly possible.

Distributing the burden between the fighters and nonfighters of the present generation. There can be nothing even approach-

ing an equal distribution of the burdens among the individuals of the generation that fights the war if some do the fighting while others stay at home and enjoy the prosperity of peace time. People who complain that they cannot live as well in war time as in peace time are apparently unwilling to bear any of the burdens of war whatsoever, even though others are sacrificing their lives, while still others are enduring severe hardships on very meager pay. The case is still worse when some of the people actually prosper more in war time than in peace time. In order that there may be even a remote approach to equality of sacrifice, those who stay at home must be taxed until their burdens begin to approach those of the men who go to the front. After this is achieved, and the burdens of war are distributed among the members of the existing generation, is the time to begin to talk about shifting a part of the burdens of war onto future generations. If a sincere effort is not first made to require all the existing generation to bear a part of the cost, the result of shifting the burden to the next generation is to enable some to escape altogether and others to carry a double burden. It is merely a device under which they who go to the front and carry the real burdens are then asked to come home—if they do come home—and help carry the financial burden by paying the taxes that will be needed to recompense those who have lent money to the government. This is what actually happens when a war is financed mainly by borrowing rather than by taxation.

Purchasing foreign supplies. A third reason for borrowing is found in the necessity of purchasing foreign supplies. In time of war the national production of articles for private consumption must necessarily be reduced in order that the country may recruit its armies and produce military supplies. Consequently it cannot send so much produce abroad; at the same time it will, in all probability, need to increase its imports from foreign countries. These imports, therefore, must be paid for largely with money. In order to meet these foreign payments extraordinary sources of monetary supply must be tapped;

literally, the money which is sent abroad for the purchase of supplies must be got back again. Since the foreign countries cannot be taxed, it must be borrowed back, perhaps over and over again, in order to make continual purchases. Here is where the credit of the country may be strained. In this case, however, the country's financial failure would be due primarily to its inability to produce its own supplies rather than to anything inherent in the problem of war finance. The country must either be able to produce its own supplies or else have credit enough to buy them from abroad.

Production of war supplies must be vastly increased. In considering the relative merits of taxing and borrowing as means of financing a war, we must never lose sight of certain basic and incontrovertible facts. One is that if we are to put several million men into the army and navy it will be necessary to put several million others into the munition factories, shipyards, and other establishments for the production of war supplies. We must even increase the output of our mines and especially of our farms, in order to provide the raw materials and the food supplies. All this will require a good many millions of men. These men cannot be created out of nothing.

Sources of additional man power. There are three sources from which this additional man power can be drawn. In the first place, those who are now at work may work a little harder, either by speeding up or by working longer hours. In the second place, those who are not now at work may be put to work. In the third place, those who are employed in the industries which are not indispensable may be withdrawn from them in order to expand the industries that are indispensable to the prosecution of a war.

The first two of these sources of man power may be sufficient if the war is to prove a trivial affair, but if it is to be a serious affair we shall have to draw upon all three, and particularly upon the third. It will be absolutely impossible to continue running the luxury-producing industries or the industries which produce superfluities at the rate which is possible in times of

peace. If the government needs the man power which has been engaged in producing luxuries and superfluities, individuals must perforce cut down their consumption of such things. There is no alternative.

Enforced economy. It will not always be necessary, however, for the government by authority directly to forbid us to consume these things. This enforced economy will come about in other ways. The government must have money with which to pay its soldiers and sailors and to buy its munitions and supplies. The citizens of the Republic will be called upon to supply the government with this money. The money will be taken either in the form of taxation or in that of voluntary loans.

Characteristic fallacies. It is necessary, however, to clear away certain confusions which arise. The sources of this confusion are mainly embodied in the following statements: (1) excessive taxation upon consumption will cause popular resentment; (2) excessive taxes on industry will disarrange business, dampen enthusiasm, and restrict the spirit of enterprise at the very time when the opposite is needed; (3) excessive taxes on incomes will deplete the surplus available for investments and interfere with the placing of the enormous loans which will be necessary in any event; (4) excessive taxes on wealth will cause a serious diminution of the incomes which are at present largely drawn upon for the support of educational and philanthropic enterprises; (5) excessive taxation at the outset of the war will reduce the elasticity available for the increasing demands that are soon to come.

As to the first of these objections, it is political rather than economic. Such a tax as is proposed will cause popular resentment only on condition that the people are crudely ignorant or unpatriotic,—that they are ignorant enough to imagine that the expenses of the war can be paid out of nothing or unpatriotic enough to be unwilling to bear the necessary burdens of the war. Even though the tax should cause popular resentment, it would not affect in one way or another the economic

wisdom of such a policy. It is one thing to say that a policy is economically sound; it is quite a different thing to say that the people know enough about economics to understand its soundness. An autocrat who was trying to determine just how much his people would stand might well consider this question. In a democracy, however, the people need not stop to ask themselves how much they themselves will stand or whether their own voluntary acts would cause resentment in themselves.

As to the second proposition, it is necessary only to point out that a great war, absorbing several millions of men of productive age either in the actual fighting or in the production of supplies for those who do the fighting, cannot possibly be carried on without a good deal of disarrangement of business. Moreover, there will be the same disarrangement of business whether we turn our money over to the government voluntarily, and thus voluntarily cut down our ability to purchase supplies for private consumption, or whether we turn the same amount of money over to the government in the form of taxes. As to the suggestion that heavy taxes will dampen enthusiasm and restrict the spirit of enterprise, that is a question of national psychology. It is hardly probable that citizens will restrict enterprise and have their enthusiasm dampened by taxes the reason for which they understand and approve. In fact, reasonably heavy taxes, for a purpose which they understand and approve, will probably spur them on to greater effort and enterprise,—will tend to cause them to work longer hours and take shorter vacations in order to be able to pay them.

The third proposition is absurd. The money which is raised by taxation will not have to be raised by loans. The only possible way in which heavy taxes can interfere with the placing of enormous loans is by making these unnecessary. Even with the proposed tax, loans will be necessary, but the less there is raised by taxation, obviously the more there must be raised by loans.

The fourth proposition has some merit, but it may well be asked whether, in a time of great national crisis, even philan-

thropic work which is not connected with the war should not be somewhat curtailed. A great deal depends upon how desperate the crisis is. All needless luxuries and every form of consumption except those which are indispensable should of course be cut off first. If this is done, most of the philanthropic work can still be carried on.

The fifth proposition can mean nothing more than that if we tax ourselves to the limit at the start we cannot later on increase taxes by as large a percentage as we could if we taxed ourselves lightly at the start. True enough; but it would not be necessary.

People cannot lend more money than there is. One of the naïve objections to the policy of paying a large proportion of the expenses of the war by taxes is that when expenditures approach the gigantic sums of present-day warfare such a tax policy would require more than the total surplus of social income. If by social income is meant money income, it will apply to loans as well as to taxes. The people cannot turn over to the government, either by loans or by taxes, more money than they have or can lay their hands upon. They have just as much money to pay to the government in the form of taxes as they have in the form of loans. The possibilities are exactly equal in the two cases. It is only a question as to which is the better policy or the better method of getting that money into the government treasury.

If, however, by social income is meant the products of industry and enterprise, the proposition becomes an absurdity. No nation can put into a war more than its total surplus over and above what is necessary to maintain the life of the people. That would be like saying that it is necessary for a country to put into the war more than its total man power.

The real cost of the war cannot be postponed. Another basic and indisputable fact which we should bear in mind is that the expenses of the war, measured in productive power and goods (or measured as all costs must ultimately be measured; namely, in energy expended), will actually be paid as we go

along, whatever our financial policy. Soldiers cannot use guns and ammunition nor consume rations which are to be produced in the future. Everything that is actually used in the war will be produced before it is used; the cost, in terms of energy, will have been paid. In terms of real income, as distinct from money income, the war will actually be supported by current income; that is, out of the products of current industry. The only question before us is, Where and how will the government get the money with which to pay for these things? It can raise it largely by taxation or largely by loans; in any case it will have to use a combination of the two methods. The patriotic theory is that it should raise as much as possible by taxation and borrow only as a supplementary measure. It would take some time to get the taxing machinery in operation, and the money which it puts into the treasury would come in gradually. At the beginning of a war a large sum must be had at once. The only possible way to raise that initial sum is by borrowing. The slacker's theory is that the war should be financed as far as possible by loans,—that taxes should be increased only in order to pay the necessary interest on these loans and such other necessary expenses as it seems expedient to pay out of the proceeds of the loans.

Therefore the real question, stripped of all verbiage, is simply this, Shall those who stay at home pay for a war as far as possible as they go along, or shall they ask the government to borrow the money in order that they may not be too much disturbed or disarranged and that the others who go to the front and do the fighting may help to pay for the war after they return home—if they do actually return?

Keeping money in circulation. It seems to be assumed, on the other hand, that money possesses some inherent power of production instead of being simply a medium of exchange.

There is a story of a little girl who decided to spend her missionary money for ice cream in order that the ice-cream man might have money to give to the missionary cause. There are men who try to persuade us that we must do the same thing

in order to raise money for a war. They tell us that unless we continue spending our money freely for unnecessary things, the sellers of these things will not be able to buy Liberty Bonds or to pay war taxes. We are told by others that money must be kept in circulation; otherwise our prosperity will be destroyed, and without prosperity we cannot finance a war.

Both these arguments attribute to money a productive power which it does not possess. To spend it for unnecessary things is to hire men to produce them. As fast as these men can be used in the industries made necessary by a war they are needed there. To keep them in the unnecessary industries is to interfere with the expansion of the necessary ones. Therefore it is pretty clear that during the course of a war, while men are badly needed in the necessary industries, it will be uneconomical and even criminal for private individuals to continue to spend money for unnecessary things.

But, granting that it is important to keep money circulating, something depends upon the channels in which it circulates. The dollar which I spend for an unnecessary thing circulates, it is true; but it is equally true that it circulates if I give it to the government, the Red Cross, or some other agency directly connected with the war, to be spent for some necessary thing. So far as mere circulation is concerned there is no appreciable difference between the two cases. But something else is involved besides this. The productive power which creates the unnecessary thing is not so well employed, from the standpoint of national economy, as the productive power which creates the necessary thing.

Granting also that it is important to give employment to men, something depends upon what they are employed to do. To spend a dollar on an unnecessary thing does, it is true, give employment to labor, but it is equally true that the same dollar spent for a necessary thing would employ the same amount of labor. The only question is whether it is better to have the labor employed in producing necessary things or unnecessary things.

If "Business as usual" means merely that we should go on doing precisely the same things in time of war as in time of peace, it is a palpable absurdity. If it means that everybody is to keep as busy as ever or become much busier than ever, it is good advice so far as it goes. What we really need to consider is, What shall we keep ourselves and others busy doing? Shall we keep ourselves and them busy producing unnecessary things or shall we do what we can to keep ourselves and them busy doing the necessary things? Obviously the latter. "Busier than ever" is a much better motto than "Business as usual."

The only way we can possibly keep everybody doing the necessary things in war time is, first, to do something ourselves which is necessary and, second, to spend all our money for necessary things. If we have more money to spend than is sufficient to purchase necessary things for our own consumption, we can either spend the surplus for tools of production in some necessary industry (that is, we can invest it) or we can turn it over to the government, the Red Cross, or some other public agency. This agency can then spend it for much-needed other things.

By all means, therefore, let us keep money circulating in war time—not that this in itself means much, but because it gives direction to the real productive energy of the country. But let us see to it that every dollar which we put into circulation is put where it will do the most good,—where it will direct the productive energy of the country into the necessary rather than into the unnecessary industries.

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PART VIII. REFORM

CHAPTER L

LABOR PROGRAMS[1]

Four programs. All programs for the improvement of the condition of the wageworkers fall into four general classes, though there are many combinations and mixtures of these four. For the sake of brevity these four classes may be arranged as follows:

I. Programs depending upon voluntary agreements among free citizens.
   1. The balancing-up programs.
   2. The collective-bargaining programs.

II. Programs depending upon authority and compulsion.
   3. The voting programs.
   4. The fighting programs.

By the balancing-up programs are meant all programs which aim to create or restore a balance among occupations so as to give those in one occupation the ability to bargain to their advantage as effectively as those in any other. Such a program would aim to enable the unskilled worker, as an independent bargainer, to prosper as well as the skilled worker, the technician, the business manager, or the capitalist. It would aim to equalize the prosperity of different classes by first equalizing bargaining power, so that each occupational class could, by the simple process of voluntary agreement among free and equal citizens, gain as many advantages as any other occupational class. This would combine equality with

[1] The substance of this chapter is found in an article by the author, entitled "Four Labor Programs," in the *Quarterly Journal of Economics* for February, 1919, Vol. XXXIII, No. 2.

individual liberty and initiative. It would leave the individual free to make his own arrangements with other individuals or groups of individuals, everyone acting voluntarily and without any compulsion whatsoever. Compulsion would be exercised only to compel the fulfillment of agreements voluntarily entered into,—never to compel individuals to enter into business arrangements against their will.

By the collective-bargaining program is meant one under which individuals voluntarily join associations and surrender to the association the power to make business arrangements and agreements for themselves. So long as no force or threats of force are used to compel the individual to join such an association or to prevent his withdrawing from it, such a program is voluntary and not compulsory. Voluntary agreements among free citizens remain the basis of organization, rather than the authority and compulsion of the state or any other organization. This is the type of business organization which has prevailed in free countries under liberal governments.

By the voting programs are meant all those where the wageworkers are to use their voting strength to get control of the government and then use the compulsory power of the government to secure for themselves what they want. Much of our social legislation and all programs of state socialism fall in this class.

By the fighting programs are meant all those under which the wageworkers are to use their fighting strength to get what they want, without waiting for the slow process of gaining control of the government by the constitutional methods of voting. These fighting programs are sometimes called by the more euphonious name of "direct action." Sabotage, strikes accompanied by violence or threats of violence, syndicalism of the more extreme sort, and Bolshevism fall in this class.

Conditions that determine which program shall be followed. It is important that we understand the relation of each of these programs to the others and to the general economic background. It is the belief of the writer that each is the logical

and inevitable outcome of general economic conditions; that one who understands these conditions in any time and place can predict, with some approach to certainty, which of the four will be the dominant program; and that the determining factor in each case will be the balance or lack of balance among the various factors of production, human and nonhuman.

The idea is too prevalent that bad economic conditions are always and necessarily the fault of some person or some institution and that the remedy is therefore the punishment of the guilty person or the reform of the defective institution. The fact is, as shown in Chapter XXXIII, that many bad economic conditions grow out of lack of balance among the various factors which have to be combined to get any large economic result. An unbalanced ration means poor nutrition; an unbalanced soil means poor crops; an unbalanced business organization—say a farm where there is too much land or not enough labor or equipment to cultivate it—means inefficient production; and, finally, an unbalanced nation, which has too much labor and too little capital, too much population and not enough land, too much of one kind of labor and not enough of another to work effectively with it, or any other of an infinite number of possible bad combinations, means ineffective production and is likely to mean a bad distribution of products.

Physical basis of value. The laws of value, instead of depending, as some would have us believe, upon a whimsical psychology or an accidental institutional background, are frequently adaptations to the physical facts connected with this problem of balance. If a man is consuming a ration with too much starch and too little protein his craving for foods rich in protein will increase and his taste for foods rich in starch will decrease regardless of the prevailing school of psychology or the institutional background. This increase in the craving for protein and decrease in the craving for starch will have some bearing not only upon his relative valuation of different foods but also upon the relative prices which he will be willing to pay for them. If the relative market supply of food of the two

kinds is such as to make everybody crave foods rich in protein and not those rich in starch, that fact is likely to influence the relative market prices of the two kinds of food. The price is an adaptation to the physiological situation and not to the institutional background. Even under communism, where no open market was allowed to exist, if the one kind of food became scarcer than the other it would be pretty difficult to prevent people from giving expression to their craving for protein by trying hard to get more of it, either by surreptitious bartering or by stealing.

A question of balance. The farmer whose soil is unbalanced, say with too much nitrogen and too little potash, and who observes that the use of a fertilizer rich in potash adds considerably to his crop is pretty certain to feel a stronger desire for potash than for nitrogen. Granting that he wants a large crop, the preference for potash as against nitrogen does not depend upon the prevailing psychology nor upon the institutional background. The fact that a larger crop follows the addition of a certain quantity of potash to that already in the soil, whereas the addition of an equal quantity of nitrogen to that already there is not followed by a noticeable increase of the crop, is a physical and not a social or a psychological fact. Even a communistic society, if it perceived that its soil was thus unbalanced and if it knew that it needed *additional* potash more than it needed *additional* nitrogen, would doubtless make greater effort to get potash than to get nitrogen, though it might not be wise enough to adopt the simple expedient of allowing people to offer a higher price for the one than for the other.

This principle applies to the ratio of population to land, or to equipment, or to the ratio of different kinds of labor to one another, as well as to the different food elements in a ration or the different elements of plant growth in the soil. A community —whether communistic, individualistic, or otherwise—in which there was an abundance of land and labor but little equipment would feel the need of *additional* equipment more than of

additional land or labor. This feeling would be based upon the observation of a physical fact; namely, that with its limited equipment a few additional acres brought under cultivation would add little or nothing to the total product because there was not equipment enough to cultivate properly the land already in cultivation. Similarly, the addition of a few laborers would add very little to the crop because of the lack of sufficient tools for those already at work. But the addition of a few tools and implements of the proper sort would enable the laborers to work to better advantage and to cultivate the land more satisfactorily, and would therefore result in a larger crop. If, on the other hand, there were an excess of good tools and a scarcity of either labor or land, the community would not desire additional tools so intensely as it would desire additional labor or land. The reason in this as in the other case would be physical rather than social, institutional, or psychological. It would be based upon the observation that a large increase of product follows every addition to its labor or land, whereas no such increase follows an addition to its stock of tools. This would be as true in a communistic as in an individualistic society. It would require rather severe repression to prevent men from giving expression to their desires by offering a high price on the one hand and a low price on the other. If men were permitted to barter, or to buy and sell, to any extent (that is, unless these operations were positively repressed), prices would adjust themselves to this fact without the shadow of a doubt.

As suggested above, this principle applies also to the ratios among the different kinds of labor and among the different kinds of equipment. In a community where there were more horses than were needed to pull all the plows, harrows, and other implements that were to be had, it would add very little to the crops to add a few horses to the existing stock, but it would add considerably to the crop if a few plows, harrows, and other implements could be added. Opposite results would follow, of course, if it should happen that there were more plows, harrows, and other implements than the existing stock

of horses could pull. Again, if in a cotton-mill town there were more spinners than were needed to supply yarn to the weavers, it would not add much to the total output if a few more spinners should appear on the scene; whereas, if a few more weavers were to appear it would make a great deal of difference. Under such circumstances it would be more advantageous to the community, assuming that it wanted cotton cloth, to add to its corps of weavers than to add to its corps of spinners. One way to get more would be to offer a higher wage. This is not the only way: weavers could, for example, be conscripted as soldiers are. Liberal communities have generally preferred the less drastic method of offering a higher wage for the kind of labor which is scarcer in proportion to the need for it. This would result in an uneven distribution of the product of the cotton industry.

It is true, of course, that this lack of balance between the number of spinners and the number of weavers could not last very long. Between those two occupations there is no great gulf fixed. The balance would soon be restored, if it were ever destroyed, by the habit of seeking the more attractive occupation. But there is a much wider gulf fixed between other occupations—for example, between such occupations as those of unskilled laborers and employers, between bookkeepers and general managers, etc. In such cases it is not easy to preserve a perfect balance, and consequently an industry may remain for a long time in an unbalanced condition as respects such occupations as these.

It goes without saying that the necessity for a balance among the various factors of nutrition and production is a physical or a physiological necessity. It goes deeper than fashion; it is more fundamental than any human institution. Many of the laws of the market are based upon this necessity, and the market itself as an institution represents an organized attempt to adjust ourselves to it. Many other human institutions, instead of being a background for the laws of value, are merely outgrowths of these laws.

Cases where customs and institutions count. There are, to be sure, other cases where convention, custom, fashion, or whim is a determining factor in value. In all such cases it may with justice be said that a knowledge of the institutional background is necessary to an understanding of the phenomena of value. For example, the Mohammedan's abhorrence of pork is wholly an institutional affair. But whether one were Mohammedan, Jew, or Christian would not make the slightest difference in the results of a feeding experiment. If a pig were given too much starch and too little protein, and it were found that adding protein would add considerably to his growth, whereas adding starch would not, we should be dealing with a physical fact. In short, our institutional background affects mainly our valuation of pork rather than the relative valuation of different factors in pork production. In general, institutions may be said to affect our valuations of consumers' goods rather than of productive agents. The relative values of productive agents are determined almost exclusively by the physical and objective facts relating to their balance or lack of balance in the physical process of production.

So far as the labor market is concerned, customs, traditions, and institutions have their principal effect, first, on the incomes of those classes which Mill and other economists denominated as unproductive laborers—that is, of those who render direct personal service and do not aid in producing vendible commodities; second, on the incomes of those who, without coöperation, produce a complete consumable commodity. The first includes barbers, valets, servants, physicians, lawyers, teachers, preachers, and a multitude of others. Whether barbers flourish or not will depend, of course, somewhat upon styles. Whether physicians of various schools earn good incomes or not will depend upon a multitude of circumstances, including the habits of the people, the repute in which the various schools are held, etc. Similar observations could be made regarding all other classes who render direct personal service. Institutions affect the value of their services very much as they do the value of

consumers' goods. But granting that a consumers' good is sufficiently desired to give it a price on the market, then the relative value of the factors which enter into its production is mainly a question of physical fact which can be ascertained by physical experiment. If a teetotaler who abhorred whisky could bring himself to manufacture whisky for the market, if a Quaker who abhorred jewelry could bring himself to manufacture jewelry, or if a Mohammedan who abhorred pork could bring himself to produce pork, he would reach the same conclusions, in any given time and place, as to the relative value of the different factors of production as would be reached by any other producer of equal intelligence.

The second group—that consisting of individuals who, unaided and without coöperation, produce consumable commodities in complete form—is almost negligible. The fisherman who sells his individual catch may be cited as an example.

Labor problems grow out of division of labor. The labor problems which are acute at the present time relate to the compensation of labor which works in combination with many other factors in production. Those laborers who render direct personal service, and those who produce by individual effort alone, sometimes have their grievances. These grievances occasionally give rise to what may be called a special social problem, but such problems differ materially from those labor problems in which the public is now chiefly interested. These problems are all more or less directly concerned with the question of sharing the products of those industries which combine many factors, including not simply labor, land, and capital but many kinds of labor and many kinds of capital. This is precisely the kind of problem with which psychology, custom, tradition, government, religion, and other institutions have very little to do directly, though they may exert a great deal of indirect influence. This problem resembles that of the relative importance to plant growth, in a given situation, of various elements in soil fertility; of the relative importance to animal growth, in a given ration, of the various elements of animal nutrition;

of the relative importance to farm production, in a given combination of productive factors, of different items in the equipment. It is a question of physical fact which could, in any case, be determined by physical experimentation if anyone were willing to go to the expense of running the experiment station.

A question of more or less. This is always a question of having *more* or *less* of a given element, and not of having *some* or *none* of it, in a given combination. In a given soil it is a question of the importance of having more or less nitrogen, not a question of having some nitrogen or none at all, which interests the real farmer. The "flower-in-the-crannied-wall" philosopher would doubtless say that, "absolutely speaking," or in terms of the "higher logic," nitrogen is no more important to plant growth than silica or a number of other soil ingredients. The scientific farmer knows that his soil generally contains all the silica his crops can possibly use, and some more besides, and that therefore it would not be good economy to buy any more. He also knows that in most soils there is less available nitrogen than his crops can use and that a little more nitrogen would be followed by a little more crop. When he is certain of that, the kind of logic which he needs in his business will lead him to buy nitrogen provided its price is not above that of the expected increase in his crop.

A fertilizer company has recently been in actual operation in New England, trying to sell a fertilizer containing none of the elements of plant food which farmers ordinarily buy, but very rich in silica; that is, sand! This company published statements of scientific men to the effect that plants require silica for their best growth. It could probably have been demonstrated that a soil absolutely devoid of silica would not grow crops at all. Therefore, some would argue, silica is the great producer of crops. This argument might be sufficient to satisfy the demands of the "higher logic," but it was not sufficient to satisfy the demands of scientific farmers, nor did it prove to be sufficient to satisfy the court nor to keep the promoters of this company out of jail.

It was suggested above that while institutions could have very little direct influence upon a problem of this kind, they could have considerable indirect influence. In a community where soils need more nitrogen to secure better crops but do not need more silica, institutions could scarcely succeed directly in giving nitrogen and silica equal values. They might succeed indirectly if they could set forces to work which would make soil nitrogen as abundant as silica, or silica as scarce as soil nitrogen. In a community where foods rich in protein were physically scarce relatively to needs, whereas foods rich in starch were physically abundant, institutions could scarcely succeed directly in giving equal values to various kinds of food. If the government or any other institution could set forces to work which would make different kinds of food equally abundant or equally scarce, the equality of values would take care of itself. Such a program could properly be called a balancing-up program.

The balancing-up program. This balancing-up program may be vastly extended. Governments, schools, and other institutions may easily set forces to work which will accelerate the accumulation of capital and eventually make it so abundant relatively to land and labor as to give capital a smaller and labor or land a larger share in distribution. That is what a thrift campaign is for. Forces may also be set to work which will spread population over wider areas, reduce the intensity of the demand for favored locations, and reduce rent, leaving larger shares to the other factors. It would be very easy to set forces to work which would reduce the number of unskilled laborers and increase the supply of employing talent. This would automatically result in some approach to equality,—at least it would result in higher wages for unskilled labor and lower incomes for the employing classes. If carried far enough a balancing-up program would give us something approximating to equality of income without sacrificing individual freedom.

Equality with liberty. A social system in which each free individual made his own business adjustments on the basis of

voluntary agreement with other free individuals and where, in addition to this universal freedom, there was universal and approximately equal prosperity would certainly be more desirable than a system which secured liberty without equal prosperity or equal prosperity without liberty. The balancing-up program is the only program which can possibly give us both. All other programs sacrifice one or the other.

Thrift. In order to make capital so abundant as to reduce the share of the capitalist class and increase the share of the laboring class we need, first and foremost, a general, aggressive, and permanent thrift campaign. The twin virtues of thrift and industry have been very unequally cultivated in almost every community. While thrift is quite as important as industry to national prosperity, it has by no means received the encouragement that industry has received. Training for industry has been provided at public and private expense, and every kind of social and moral pressure has been brought to bear upon the young to be industrious. No one has commended the idle man, but many have commended thriftlessness and extravagance. Advertisers and salesmen have never exercised their arts and blandishments to induce men to be idle, but they have done much to induce men to be thriftless and extravagant. Only a few agencies have been working effectively to induce men to save and invest their incomes. One very important step would be taken toward balancing things up if as many encouragements and temptations and as much social and moral pressure could be brought to bear upon men to induce them to save as are now brought to bear to induce them to work.

It is almost as great a help to industries when citizens invest largely in industrial bonds as it is in war when citizens invest largely in government bonds. In the one case an abundance of capital is secured for the equipment of industries; in the other case an abundance is secured for the equipment of war enterprises and paying the war expenses. Those communities and nations in which large numbers are investing in industrial enterprises are the communities or nations whose industries will

grow and expand and in which there will be ample employment for labor of all kinds. Let us suppose that two communities have equal incomes and are able to spend equal amounts of money this year in purchasing goods or hiring labor to make goods. Let us suppose that Community A spends all its clear income this year on consumers' goods, spending only enough on producers' goods to keep its supply of capital intact, whereas Community B spends half its clear income this year on producers' goods and only half on consumers' goods. There will be as many goods purchased this year and as much labor employed in Community B as in Community A. The difference will be that half the available labor power in Community B will be employed in making producers' goods, whereas all the available labor power in Community A will be employed in making consumers' goods.

Next year, however, Community B will be better equipped with producers' goods than Community A. Its total product (that is, its real income) will be larger than Community A's. It will have more to spend and will be able to employ more labor or employ it to better advantage. If it continues spending half its enlarged income in producers' goods, adding largely to its productive equipment from year to year, it will outstrip Community A and leave it farther and farther behind. In a short time laborers from Community A will be migrating to Community B, where there are more employment and better wages.

The different items in a balancing-up program need not be discussed in detail. They will be considered in detail in Chapter LVI.

The collective-bargaining program. The indispensable man can generally get what he wants by the method of voluntary agreement. The superfluous man will have difficulty. To the man who, in any industrial situation, is indispensable, freedom means freedom to prosper. To the superfluous man freedom may mean freedom to starve and is pretty certain to mean freedom to be relatively unprosperous.

Any industrial condition in which one man is indispensable and another superfluous is necessarily an unbalanced condition. No man is indispensable if there are plenty of others who can do the same kind of work that he does. No man is superfluous unless there are more than are needed to do the kind of work which he can do. A situation in which no class of men was so small as to make any one indispensable and no class so large as to make any one superfluous would be a better-balanced situation. One in which more men were about equally needed in every occupation would be perfectly balanced.

It has already been pointed out that even in an unbalanced situation, while the individual in a large class may be superfluous, the class as a whole is indispensable. There may, for example, be so many ditch-diggers as to make any individual among them superfluous; nevertheless, ditch-diggers as a class may be indispensable. The superfluous individual, bargaining alone, is weak and can never, so long as he is superfluous, bargain to his own advantage. The indispensable class, if it can bargain as a unit, can take advantage of its indispensability and bargain to its own advantage. Therein lies the philosophy of the collective-bargaining program.

Its reason for existence is found, however, in an unbalanced industrial system. A kind of labor which is scarce enough to make each individual laborer practically indispensable would not need collective bargaining. Individual bargaining would give him his full share in the general prosperity. To use collective bargaining to add still more to that prosperity would not be a means of defense but a means of extortion. It would not differ in any essential particular from the trust, and the public would soon become as impatient of collective bargaining on its part as it has already become of collective bargaining on the part of the trust.

Where the lack of balance among the factors of production is not so very extreme (that is, where there is no great overabundance of one factor and no great scarcity of another), collective bargaining on the part of those who sell the overabun-

dant factor is a sufficient remedy. That happens to be the situation in the United States with respect to most forms of skilled manual labor. Skilled laborers are not so numerous as to place them at any great disadvantage in the bargaining process. Such disadvantage as they suffer can generally be overcome by the simple process of collective bargaining. They are not strongly tempted to adopt either the voting or the fighting program: first, because they have no such grievance as would justify their surrender of individual freedom; second, because they are not numerous enough to give them much voting or fighting power.

The voting program. Generally speaking, the more numerous any industrial class happens to be, the weaker its members are in the process of bargaining on the free and open market. But the numbers which make them weak in bargaining make them strong in voting. On the market they are at a disadvantage; in politics they are at an advantage. The greater their weakness on the market, the greater their voting strength in politics.

As stated above, where the disproportion of numbers is not so very great, the disadvantage in bargaining is likewise not so very great, neither is their voting strength so very great. Under such circumstances the voting program does not seem to be necessary nor does it promise much success. Collective bargaining is the only logical program. But where the disproportion is very great the voting program seems to be more of a necessity and, what is more to the point, promises greater success.

In a community where any class of wageworkers, say unskilled laborers, outnumbers all other people the oversupply of unskilled workers will make their position on the labor market very difficult. Even collective bargaining has its limits, mainly because of the difficulty of keeping so large a mass together in order to bargain as a unit. But since they outnumber all others their voting strength is overwhelming if they can be induced to vote as a unit. They could easily control the state, elect the entire personnel of government, and use the compulsory power

of the government to gain their own ends. As a matter of fact they would not even have to take the initiative. Candidates for the salaries and emoluments of public office would certainly appreciate their opportunities. They would seek the votes of this class which had so many votes to give, by offering it everything it wanted, even more than it had the courage to ask for. The voting program is therefore almost a certainty in any community where the disproportion of occupational classes is very great.

This will explain why the dominant elements in American trade-unionism have always stood for a collective-bargaining rather than for a voting program. They have not needed to control the state in order to gain fairly good wages for themselves, and, moreover, they have not had votes enough to control the state even if they had wanted to. It will also explain why English laborers have adopted a voting program. The disproportion between wageworkers and other factors of production, or other elements in the population, is much greater there than here. In bargaining, English laborers are as a class therefore weaker and in voting stronger than American laborers. English laborers therefore have greater need of the help of the state and greater power to gain control of the state than have American laborers. The sheer logic of this situation calls for a greater trend toward socialism there than here.

Other classes besides laborers have shown the same tendency to use the state to help them out of a situation in which their bargaining power was reduced. In the seventies and eighties of the last century there was a disproportionate production of agricultural crops in this country. The rapid settlement of the rich prairies of the West had poured a flood of agricultural products upon the markets of the world. This put the farmers at a disadvantage on the free and open market. Their numbers proved to be their weakness on the market but their strength at the polls. They were not slow to realize the situation and to use their voting strength rather than their bargaining weakness. Even if they had been slow to realize it, they were abundantly

reminded by a swarm of candidates for office who had uses for the large farmer vote. Since the beginning of the present century the farmers have not been so numerous relatively to the rest of the population as to be placed at a great advantage at the polls. In fact, the rural population is now less than the urban. Consequently the wiser farmers are not now demanding so much help from the government. At the same time the candidates for high public office have, except in the far Northwest, almost forsaken the farmer and have become very solicitous of the labor vote.

There was also a time when the manufacturers—especially those starting new lines of manufacturing—felt weak on the market, or thought that they did when brought into competition with old and well-established rivals across the water. They then turned to the state for help. They were able to deliver considerable numbers of votes. The result was that candidates for office became solicitous as to the welfare of infant industries.

In England after the Black Death, when labor was scarce and hard to find, laborers were strong in bargaining, but weak in voting because they had no votes. The employing classes were temporarily weak in bargaining but strong in voting, since they did whatever voting was done. At any rate they controlled the government. They were not slow to use the government to help themselves in the bargaining process by passing stringent laws for the regulation of wages.

In view of all these experiences it is pretty certain that any class which finds itself so numerous as to be weak in bargaining and strong in voting will make use of a voting program. It is not so certain, judging by past and present experience, that it will use its voting power wisely. In fact, no case has yet appeared where a voting program adopted under such conditions was not destructive rather than constructive; which was not demagogic rather than economic; which did not consist in killing the goose that laid the golden eggs, in order to seize the whole stock, rather than in increasing the flock. But that is

not the important certainty. The important certainty is that wherever and whenever such an unbalanced condition is allowed to arise as that which exists in England today, a voting program similar to that which has been paraded in this country as the program of the British Labor Party is certain to be adopted. Though it lacks a single constructive feature, though it is made up exclusively of scraps of Marxian jargon, catch phrases, and shibboleths, nevertheless it is the kind of program which any class is likely to adopt in its own interest when it for the first time concludes that it can outvote other classes and control the state.

The fighting program. It is sometimes affirmed that the labor program in England is more "advanced" than that of the American laborers. By the same token the program of the Russian laborers is more "advanced" than that of the British. The disproportion of the wageworkers to other urban classes is also greater in Russia than in England, as it is in England than in the United States. That is to say, there are fewer technicians, business men, capitalists, and also smaller accumulations of productive capital and fewer productive establishments calling for men, in proportion to the number of men available to run them, in Russia than in England, and in England than in the United States. This disproportion puts the Russian laborers, particularly the great mass of ignorant and unskilled laborers, at a still greater disadvantage in bargaining, but gives them vastly greater strength in other ways.

Numbers give strength not only in voting but also in fighting. Fighting, provided victory is certain and overwhelming, is a shorter cut to what is wanted than voting. To be sure it may, like other short cuts, not work well in the long run, but it looks like a quicker method of getting possession of accumulated wealth than the voting program, as the voting program is quicker than the program of industry, thrift, and sound investing.

Where the numerical strength of the wageworkers is not overwhelming, fighting may prove expensive even though ultimate success looks pretty certain. Voting looks like a cheaper

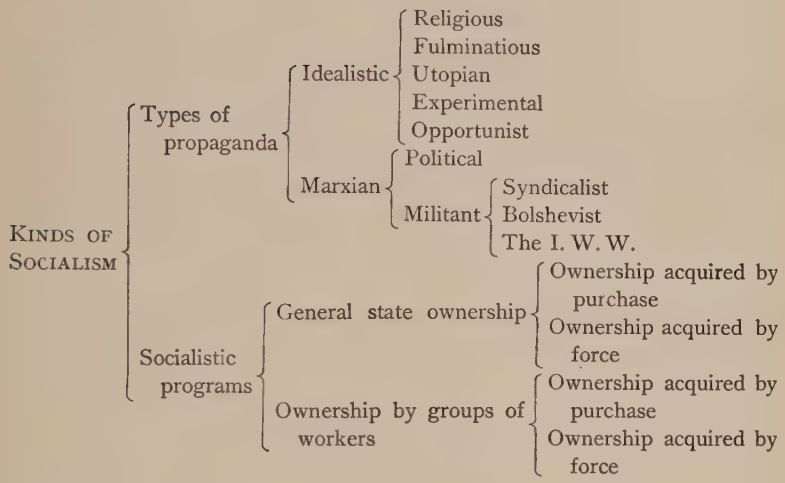
program than killing. But where numerical strength is so overwhelming as to make victory in fighting not only certain but cheap, because of the absence of power of effective resistance on the part of other classes, the fighting program is pretty certain to be adopted, provided there is no moral restraint or economic wisdom to lead people to adopt a more constructive program.

It is useless to point out to a great mass of ignorant and unskilled labor that even though they have the power to take possession, with very little fighting, of the accumulated wealth of the country, still they would better not do it because, in the long run, they will lose more than they will gain by it. If they were capable of appreciating such arguments they would not be ignorant and unskilled laborers. Men are not ignorant and unskilled laborers in industry and at the same time farsighted statesmen in politics. They are just as ignorant and shortsighted with respect to public as with respect to private affairs. There is therefore no safeguard against the fighting program except the prevention of the development of a large class of ignorant and unskilled laborers. If such a class exists, there will be trouble; if it does not exist, there will not be any danger of a fighting labor program.

Therefore we may conclude that whenever and wherever a nation becomes so unbalanced occupationally as Russia, the fighting program is certain to be the dominant labor program. In short, we in this country can have any one of these four programs which we choose to have. If we balance things up none of the other programs will become dominant or dangerous. If things become slightly unbalanced some kind of collective-bargaining program is certain to grow out of the situation. If they become somewhat more unbalanced a voting program is certain to become the dominant program supported by the numerically superior class, whose numerical superiority makes it weak on the market but strong at the polls. If they become still more unbalanced the numerically superior class, finding itself hopelessly weak on the market but overwhelmingly strong in the use of physical force, will use its strength to take what it wants.

CHAPTER LI

SOCIALISM



An authoritarian program. The most widespread of the various authoritarian movements is that which goes under the name of socialism. It has never received the support of a majority of the voters, or even a large minority, in any country; but it has a vigorous organization of propagandists in practically every country. The only real victories it has won have been those of physical force, where, as in Russia and, for a short time, as in Hungary, a violent minority cowed the majority into submission. Even the violent minority in Russia, when faced with the necessity of producing enough to feed and clothe the people, was forced to give up most of its socialism and return, in part at least, to private property, especially in land. Because of the activity of its advocates and the vigor of its propaganda, it is necessary to understand what socialism is and what its advocates are driving at.

"Socialism" and "communism" have shifted meanings. The term "socialism" has a variety of meanings, though there are certain elements common to every definition. During the last seventy-five years the meanings attached to "socialism" and "communism" have been shifted. That which is now known as socialism was formerly known as communism. Karl Marx, who is regarded as the great apostle of modern socialism, called himself a communist. On the other hand, "socialism" was applied to general schemes for social amelioration which did not involve any fundamental change in the organization of society. Communism, however, fell into disrepute, and its followers discarded the name and began calling themselves socialists. Since the World War socialism has, in turn, fallen into disrepute and communism is again the dominant form of revolutionary propaganda.

There is a tendency for partisans of any program or movement to define their program in the most favorable terms possible. This applies to socialists as well as to other propagandists. Sometimes this tendency leads to a definition of socialism which does not define, but which includes the opponents as well as the proponents of socialism. When it is said, for example, that socialism teaches the doctrine that only he who produces shall consume, it may be replied, "So also does individualism"—and practically every other ism that has anything to do with the production and distribution of wealth. When it is said that socialism teaches the doctrine of equality of opportunity it may be replied, "So also does individualism" —and all the other isms.

The difference between a socialist and a nonsocialist. In order to define socialism we must find something which will completely distinguish the socialist from the nonsocialist. The only definition that will do this is the following: A socialist is one who believes that the community, the public, or the government should own and operate the means of production, leaving to individuals the ownership of most articles of consumption. By the means of production are meant practically all that is

included under the names "land" and "capital,"—farms, factories, railroads, mercantile houses, and office buildings would all be included; under the program of socialism all these things would be owned and operated by the community, the public, or the government. This would mean that almost every individual would be in the employ of the government in one way or another. Since there would be no private enterprise, no one could start a farm, a factory, a store, or any business enterprise of his own. Since no one could start any such enterprise, no one could be employed by a private employer. Since no one could be either in his own employ or in the employ of any private organization, everyone who expected an income would have to be in the employ of the government.

There is some difference of opinion among socialists as to how far this principle of government ownership and operation should extend. Some profess to be willing to stop with trusts and monopolies. This, however, is populism rather than socialism. It is based not on a theory of capital but on a theory of monopoly. Many people who favor the private ownership of capital are opposed to monopoly and believe that the best way to curb monopoly is to turn all monopolistic enterprises over to the state. Such a person might utterly reject all socialistic theories respecting capital. Moreover, every thoroughgoing socialist really bases his conclusions on his theory of capital. The work of Karl Marx, on "Capital," has been called the Bible of the modern socialist. This book pays very little attention to the question of monopoly; it consists almost entirely of an attack upon capital and capitalistic production. From Marx's point of view it is not monopolized capital, but capital as such, that gives its owner the power to exploit and defraud other people. The capital belonging to a farmer as well as that belonging to a great trust, to a small manufacturer as well as to a large manufacturer, to the driver of a jitney bus as well as to a street-car company, is to be owned and operated by the public.

Socialism is not populism. On the other hand, the slogan "Let the nation own the trusts" has nothing to do with capital

as such. Such a program is based entirely on a theory of monopoly, which is the essence of populism rather than of socialism. Those who hold to this doctrine may quite consistently hold to the idea that capital which is not monopolized is a help rather than a hindrance to labor, that he who accumulates capital by consuming less than his income is benefiting rather than injuring labor, and that therefore everybody ought to be encouraged to accumulate capital and invest it in productive enterprises. From this point of view the individual who has accumulated capital and invested it in a productive enterprise has not only increased the productivity of the community but is entitled to some reward for that service which he has performed. This reward would be called interest. The populist, therefore, would approve of the receipt of interest on the part of the owner of unmonopolized capital.

All the great authoritative books on socialism are fundamentally opposed to interest or to anyone's receiving any income in the form of interest. If labor is the only producer of wealth, the saver and accumulator is not a producer and is therefore not entitled to any share in the product. Since interest is the share which goes to the accumulator and investor, it cannot be justified under the socialistic philosophy.

Difference between a socialist and a liberalist. The definition of a socialist as one who believes in the common, public, or government ownership of all the means of production separates the socialist not only from the populist and the communist but from the liberalist as well. Moreover, this is the only definition which will at all distinguish the socialist from the liberalist. The liberalist is quite as desirous of economic justice and of equality of opportunity as the socialist, but he believes that the liberalistic program is better adapted to the securing of those ends than is the socialistic program. The liberalistic program permits the private ownership of capital, and it also permits the receipt of interest as a private reward, on the ground that the accumulation of capital is a produc-

tive service,—not that it is philanthropic, but that it is useful to society.

In order to becloud the issue it is sometimes stated that the socialist believes that men should be paid for doing things and the liberalist that men should be paid for owning things. The liberalist does not believe that men should be paid for owning things unless the ownership is a symptom of their having done something which was useful. If two men, A and B, have been doing equally good work with their hands and their heads and have earned equal incomes they should be paid the same, according to the liberalist as well as the socialist. If, however, A consumes all his income, but B invests a part of his in the tools of production, the liberalist believes that B has done better than A. If everybody did as A does, the nation's stock of tools would never increase; if everybody did as B does, the nation's stock of tools would increase rapidly. The more citizens it has of the B type, the more prosperous will the nation become; the more it has of the A type, the less prosperous it will become. It is very important that men should be encouraged to join the ranks of the B's rather than of the A's. The liberalist therefore holds that there should be some inducement to men to do what B has done; namely, to invest a part of their income rather than to consume it.

In the smartness of debate one might still say that B is hereafter being paid for owning something, whereas A was paid only for doing something; but as a matter of fact that which B appears to be paid for owning is only a deferred payment for that which he did before. When he refrained from using up his income in riotous living and devoted it to a useful purpose he postponed the day of his enjoyment of his income. It is virtually, therefore, deferred payment for his work. The money which he received for his work was not final payment; the final reward of every individual is that which he consumes. When B decided to defer consumption he was really deferring the receipt of his wages.

There is no other definition of "socialist" or "socialism" which will separate the socialist from the nonsocialist or which will particularly separate him from the liberalist. The term "liberalist" is justified because the liberalist believes that, as far as possible, each individual should be at liberty to start his own enterprise if he is so disposed or to work for someone else if he prefers; that he should be at liberty to work for private individuals or to work for the government, according as he can make the most satisfactory voluntary agreements. In short, the liberalist is willing to trust men with the power of free contract, whereas the socialist relies mainly on the government's power of compulsion.

Socialism involves more use of the government's power of compulsion than does liberalism. It has been said that the power to tax is the only capital the government needs. But the power to tax is compulsion. In order to carry out a socialist program the public would have to use its power of compulsion in many ways. It would have to prohibit competition by private individuals against the state as it now forbids private individuals to compete with the post office in the carrying of first-class mail. It would have to use its taxing power to compel the payment of deficits whenever deficits occurred. The liberalist, on the other hand, proposes to reduce to a minimum the compulsion of the government over the individual. An industry which cannot be carried on without any compulsion whatsoever had probably better be left to die, unless it be one which is necessary for military protection. If an individual who desires to manufacture shoes cannot manufacture them successfully without the power of compulsion, he should not manufacture them at all. If he can buy his raw materials on the open market and hire his labor on the open market and sell his product on the open market, making use everywhere of voluntary exchange and voluntary agreement, and can manage to make a profit out of his business he is entitled to remain in business. It shows that he is efficient enough to assemble the various factors of production in such a way as to produce an

article which is worth more than the cost of those factors of production. This is highly economical. If in order to make a living he had to be paid out of the public treasury, and the public had to make use of its power of taxation in order to get the wherewithal to pay his salary, there is a strong probability that the product would not be worth as much as the factors which entered into it. In that case the power to tax would have to be made use of to keep the business going, but the fact that compulsion was necessary would be proof that it ought not to be used, but that the business should die a natural death.

Where there is no free bargain and sale,—where consumers are not at liberty to turn from one producer to another and buy whatever suits them best, where the producers of raw material are not at liberty to sell to any manufacturer who will pay them the highest price, and where labor is likewise not free to bargain to its own advantage,—there is no assurance that the maximum economy will be secured.

Compulsion sometimes necessary. It is not to be inferred, however, that the liberalist is an anarchist and therefore opposed to all exercise of compulsion or governmental power. He is one who believes that a great many lines of production can be safely and successfully carried on without the use of compulsion, under voluntary agreements, free contract and sale, and individual initiative. He also quite frankly recognizes that there are many things which cannot be done in this way. For example, the forestation of certain mountain slopes would be undertaken by private enterprise only when the enterprisers thought that it would be profitable to them. But although it might be unprofitable when considered by itself, it might still be highly profitable when considered from the viewpoint of the nation as a whole. If the deforestation of high mountain slopes results in the overflow of streams and the destruction of valuable land along the lower watercourses, this is a matter which affects the country as a whole but might not interest the individual owners of the high slopes. If they found it profitable to cut off the timber and sell it they would do so even

though property of much greater value a few hundred miles away on the river bottoms were destroyed. Here would be a clear case where government enterprise would be superior to private enterprise. But similar reasoning would in some cases prove the superiority of international enterprise over government enterprise. It might very well happen that the high mountain slopes were within the territory of one nation, and the river bottoms in the territory of another. In that case the nation owning the high mountain slopes would have no interest in protecting the river bottoms. Nothing but an international arrangement could solve that problem.

Again, take such an enterprise as the building of lighthouses. The private individual who built a lighthouse on a rocky coast would scarcely be able to collect toll or to get payment for the utility which he was furnishing. Not having the power of compulsion he could not force mariners to pay nor could he tax the public at large in order to build and maintain lighthouses. The public alone has this power of compulsory collection. In any other case (and there are many of them) where it can be shown that freedom of contract will not succeed in getting an important work done or an important utility produced, the liberalist is willing to see compulsion used.

"Socialism," like "vegetarianism," is an exclusive term. "Liberalism" is therefore not an exclusive term, as "socialism" seems to be. In this respect "socialism" is like "vegetarianism" and certain other exclusive terms. One is not a vegetarian by virtue of the fact that one sometimes eats vegetable food; one is a vegetarian only when one refuses to eat anything else. A liberalist with respect to food is willing to eat any kind which seems to him to be desirable, and to permit others to do the same. In a similar sense one is not a socialist by virtue of the fact that one is willing that the government should do some things; one is a socialist only when one believes that private individuals should not carry on any productive industry or own any productive capital. The liberalist is willing that industry shall be carried on in any way that seems to promise desirable

results. If an individual farmer can grow corn successfully the liberalist is willing that he shall do so and make a profit out of it; if the individual manufacturer can manufacture successfully the liberalist is willing that he shall do so and likewise make a profit; and so on. He perhaps goes a step farther and believes that preference should be given to free and voluntary business arrangements rather than to compulsion, and that compulsion should be used only when the voluntary system fails to get desirable things done.

Criticism always easy. As to the merits of the socialistic program as compared with other programs, there will always be considerable differences of opinion. It is not difficult to point out with a great deal of particularity the evils that result from a liberalistic policy. The unfortunate condition of those people who are not in a position to bargain to their own advantage is perhaps the strongest argument used by the present-day socialists. It is very easy to find many communities in which certain classes of laboring men find it impossible to get good wages by the method of voluntary agreement, whereas other people who use this method get larger incomes than are necessary or desirable. This observation, however, is not confined to labor. Anyone who is trying to sell something with which the market is oversupplied is in a more or less helpless position. When more is offered for sale than buyers care to buy, the seller is very dependent, whereas the buyer is independent. Under the system of voluntary agreement the seller must take what he can persuade the buyer to pay, and the buyer can take his choice. If, however, you reverse the conditions you find buyers who want to buy more than sellers are willing to sell. Then buyers are very dependent; they must take whatever they can persuade the sellers to sell, whereas sellers are independent and can take their choice.

It happens that certain kinds of labor seem to be almost chronically in this position of dependence. They always, and rightly, evoke sympathy. There are two ways, however, of correcting the difficulty. One is to substitute the system of

compulsion for the system of voluntary agreement; the other is to make that kind of labor scarce and hard to find. Seeing that these unskilled laborers are now beaten under the system of voluntary agreement, it looks rather obvious to some people that something else must be substituted. But the liberalists maintain that labor is not necessarily, and not always, at a disadvantage under the system of voluntary agreement. If we can redistribute the labor supply so that there will not be too much of one kind in proportion to the other factors, then the laborers will be in a position of great independence. It is not difficult to point out instances where the laborer is independent and the capitalist dependent,—where the preservation of the capitalist's property—where even his income itself—depends on getting labor when there is not enough labor to go around. In such cases the capitalist must take whatever labor is offered, whereas the laborer can take his choice of employers. There need not be the slightest difficulty in creating such conditions for labor in general, but it will require the following of a program radically different from that of the socialist. It looks much easier merely to exercise the compulsory power of the state and cure the difficulty at one stroke. Not many difficulties, however, are permanently cured at one stroke or by the exercise of compulsion.

Why there are socialists. When the victim of a wasting sickness goes to a physician for help he is very likely to be disappointed. The physician, if he is scientific and honest, can seldom promise him a definite cure. Being a scientific man he can point out the causes which produce the illness and say that if at some time in the past the patient had pursued different habits he would not have become ill. This, however, is cold comfort to the sick man, who is suffering intense pain. Or the physician may prescribe a course of treatment which, if rigidly followed for a period of time, will tend to remove the causes of the illness and eventually improve the patient's condition. This likewise is cold comfort to the man in pain, who wants immediate relief. Such a man is in a good frame of mind

to lend a favorable ear to the "doctor" with a specific remedy who promises him a specific cure. This is why a certain type of unscientific practitioner, commonly called a quack, flourishes.

Similarly, the man who is in the grip of poverty, as well as his sympathizers, is likely to be disappointed with the program of the economist. The economist, if he is a scientific man and honest, will be compelled to say that there is no immediate relief which is not likely to produce worse results in the future. Being a scientific man he can point out the conditions which tend to induce poverty and can prescribe policies which, if they had been pursued consistently for a number of years, would have prevented the poverty which now exists. This is cold comfort to the man who is already suffering from poverty and longing for relief. Such a man is in a condition to lend a favorable ear to the doctor with a specific remedy. The obvious and specific remedy which is commonly used is the compulsory power of the state or of the mass over the individual. This is sometimes called democratic, but there is nothing particularly democratic in compulsion. One of the most democratic things in the world is freedom of contract,—freedom on the part of the individual to pursue his own interests so long as they happen to coincide with those of the public.

There is a close parallelism between the condition of the laborer on the oversupplied labor market and the condition of the producer of vendible commodities on an oversupplied commodity market. In the early nineties of the last century farm products were greatly oversupplied. There had been a rapid settlement of the fertile prairies of the West and a rapid increase in the tillable area on all the farms. The result was that a great flood of agricultural products was poured upon the markets of the world, depressing prices not only in this country but in Europe as well. In that situation the farmers were in a dependent condition. They had much to sell and there were apparently few buyers,—few at least relatively to the amount of produce that was offered. The average farmer had to take what he could get. Naturally enough this situation created dis-

satisfaction, and demands were made by the agricultural classes of the South and West for some kind of compulsory action by the government. On the basis of free contract they were at a great disadvantage and not unnaturally desired to use some other method, for the time being at least. Freedom, to them, frequently meant freedom to become bankrupt and to go hungry.

During the first two decades of the present century the conditions were reversed, and the boot was on the other foot. The world was experiencing a great shortage of agricultural products. Buyers were everywhere asking for products, and there appeared to be few sellers,—few at least relatively to the number of buyers and consumers. The consumers were then in a position of great dependence, but the farmers were in a position of great independence. On the basis of free contract the farmer had the advantage and the consumer the disadvantage. The farmer was not then heard calling for a limitation upon the right of contract. He was not demanding the substitution of compulsion for freedom. There were demands, however, on the part of consumers for government action in the fixing of prices and the control of marketing-processes. Since he was at a disadvantage in the bargaining process the consumer felt that something else should be substituted. Freedom to buy food did not seem so very precious. Farmers, however, were then inclined to protest against the substitution of compulsion for bargaining; that is, the substitution of price-fixing by the government for the policy of letting demand and supply determine the price. At the present time, however, (1921), there is a great slump in the prices of farm products, and a good many farmers (it is impossible to say how many) are again calling for government help of various kinds.

There was a time in England, following the Black Death, when labor seemed to be abnormally scarce as compared with what had been known for centuries. The laborer was able to bargain to good advantage. He did not then demand anything better than free contract in the determination of wages. The

demand for compulsion, however, came from the landowners and employing classes, and much severe legislation was passed fixing wages and punishing attempts on the part of laborers to bargain for higher wages.

Generally speaking, however, in the history of the greater part of the world, conditions have been such that laborers rather than employers have been at a disadvantage in bargaining. Unskilled laborers have generally been abundant. It has seldom been necessary for an employer to spend much time searching for men who were willing to work for him. The searching has been on the other side. Labor being thus almost permanently oversupplied, it has led to a great many demands for the substitution of compulsion for free bargaining as a means of fixing wages.

Now it is not necessary to have a scourge in order to thin out the ranks of unskilled labor. The case of the Black Death was cited merely because governments have generally been so stupid as to do nothing about it, and here was one case where a scourge proved to be in some respects more intelligent and generous than governments have been. It is quite possible, by the use of a little intelligence and progressiveness, to create conditions under which the demand for labor will continually expand and the supply of unskilled labor continually contract, putting the unskilled labor in a continually improving situation with respect to the bargaining process, making it continually easier for the laborer to find a job at remunerative wages but, as a necessary consequence, continually more difficult for the employer to find unskilled labor at low wages. By this process the system of free contract could be preserved and labor could be made independent and prosperous at the same time.

If this were done, in all probability the demand for compulsion would again come from the employing classes. Finding themselves at a disadvantage in the bargaining process, they would seek government aid in the fixation of wages by compulsion. That evil, however, could be combated when it arose.

Liberalists and authoritarians. The reformers of our system of distribution may therefore be grouped into two main classes, —the liberalists and the authoritarians. The authoritarians are those who wish to substitute some form of compulsion for the system of free contract. The liberalists are those who prefer to keep the system of free and voluntary agreement rather than resort to compulsion. They rely upon free initiative not only in getting things produced but in determining the shares in distribution. Further, the authoritarians may be subdivided into two classes: first, those who believe in a benevolent despotism, such as that which produced most admirable results in the Canal Zone during the building of the Panama Canal or that which prevailed before the war in the German Empire; and, second, those who believe in the authority of the mass over the individual, where the will of the mass is indicated by majority votes and by the election of popular individuals as directors and administrators. The liberalists are likewise divided into two groups: first, those who believe that there is a logical dividing line between the sphere of government action, which must always be compulsory, and the sphere of private enterprise, which must always be voluntary and on a free contractual basis; second, the extreme anarchists who do not believe in force or compulsion of any kind, not even the exercise of police power, much less of military power.

The real conflict between authoritarians and liberalists is between the two intermediate groups; namely, those who believe in the compulsion of a democratic mass over the individual and those who believe in a fairly definite dividing line between the sphere of compulsion and the sphere of freedom—in other words, it is the conflict between socialism and liberalism as we find it in the world today.

The one thing that unites all who can properly be called socialists is their opposition to the private ownership of the means of production, such as land, factories, shops, stores, etc. There are almost as many working programs for abolishing private property in these things as there are socialists. These

working programs, however, fall into two main classes,—the political and the militant. By political programs are meant all those under which the voting power of the masses, if they can ever be persuaded to become socialists in office, is to be used for carrying elections, putting socialists in office, enacting legislation, and changing constitutions so as to take away from private individuals the productive property which they now possess and put it all into the hands of the public. The public in question may be the large group called the state, in which case the system is called state socialism; or it may be a smaller group, such as a guild, a trade union, a syndic; or even, in some cases, a small territorial group such as a township, in which case various names are applied such as guild socialism, syndicalism, or the soviet. Even in these cases, however, the larger group, called the state, must use its power to dispossess the private owners and permit the small groups to take possession.

By the militant programs are meant all those that proceed not to gain control of the existing government by voting but to defy it or overthrow it by force. In both cases force is to be used to dispossess private owners—in one case it is the force of the state, operating by regular, orderly, and constitutional methods; in the other case it is the force of the mob, operating in irregular, disorderly, and unconstitutional methods. The ultimate effects are practically the same, the difference being in the methods by which they are attained.

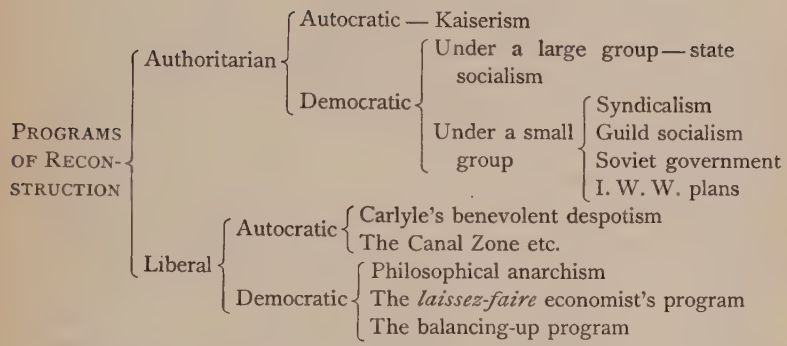
Before the World War the kind of socialism most talked about was state socialism, or socialism carried out by a large group called a state. The war made that type of socialism, temporarily at least, unpopular, and it is not much talked about now. In its stead socialism under a small group, in some of its various phases, is now attracting attention, particularly in England and Russia. Germany (where, before the war, the advocates of state socialism were strongest, forming the leading political party) is now in the hands of the Social Democratic party, but this party has given up even state socialism and has adopted definitely a program of private capital, as all parties

in all countries will when they are recalled to their senses by hard experience.

Even in Russia, where the extreme wing of the socialist party gained control and where the so-called social revolution was ushered in with much noise and violence, the experience of the Bolsheviki is sobering them down. It was apparent from the very beginning that there were only two possible outcomes. One was to starve so many people to death or otherwise so reduce the population that Russia could, with her rich resources but inefficient social organization, manage to feed and clothe her remaining population. The other was that the new government would come back to the essentials of capitalism; that is, the recognition of private property in whatever one has produced or bought from the producer on a free and open market. Wherever this principle is recognized, there is capitalism because men will make tools and also buy and sell them. Whoever makes a tool or buys one is, to the extent of owning that tool, a capitalist. Whether the tool is small and cheap or large and expensive does not affect the principle. Without a frank recognition of this principle no large population ever was or ever can be abundantly fed and clothed. Already (1921) the essentials of capitalism are being recognized by the soviet government of Russia, though with infinite effrontery its leaders still claim to be leaders of a revolution instead of acknowledging that they are making themselves leaders of the inevitable counterrevolution.

CHAPTER LII

COMMUNISM



Compulsion versus freedom. It was pointed out in the chapter on Labor Programs that the schemes for the improvement of the laboring classes fall under two general heads. In this chapter we shall discuss some of the more far-reaching plans of social reconstruction, as outlined above. The autocratic form of authoritarianism (namely, Kaiserism) is, fortunately, dead. Among those which rely upon the authority of the mass or group over the individual, communism is the most extreme. It is sometimes called coöperation, but it is compulsory coöperation as distinguished from voluntary coöperation. The compulsion is made complete by the fact that the community, or the group, owns all the property and the individual owns none. All the processes of production and distribution are carried on by the community as a whole rather than by individual initiative and voluntary agreements among individuals.

Meaning of communism. Communism may therefore be defined as a type of social organization in which all wealth, including both producers' goods and consumers' goods, is owned and controlled by the community. It differs from socialism in

that the latter proposes that the community shall own and operate only producers' goods, leaving the consumers' goods to be owned and enjoyed by individuals. A completely communistic society, for example, would own the dwelling houses and even the food and clothing, but would distribute these to the individual members very much as they are now distributed within the small group which we call the family. From a certain point of view we might say that the ideal family of today is a small communistic group in which all property is held in common and enjoyed in common rather than separately by the individual members of the family.

Relation to anarchism. Theoretically, communism would be at the opposite end of the scale from anarchism, which is an absence of all government,—at least the absence of all compulsory government. In actual discussions, however, it is not always easy to distinguish between a communist and an anarchist. As a matter of fact, there is a considerable group of individuals who call themselves communist-anarchists; that is, they are opposed to any kind of government which resembles those with which we are now acquainted. They would substitute small communistic groups, each one working more or less independently of the others, and make such voluntary arrangements for exchange of products as they might find to their mutual advantage. In so far as they would oppose all compulsion, they would be called anarchists; in so far as they would have all wealth owned in common, at least within small groups, they would be called communists. Unless, however, the small group could exercise some compulsory control over the property of the group, it would be anarchism rather than communism. If the group did exercise orderly control over its own property to the exclusion of individuals and of rival groups, it would be compelled to exercise compulsion and would therefore, to that extent, cease to be anarchistic and become purely communistic.

Utopias. Naturally enough, communism has never been tried on a large scale. It has been advocated by many

philosophers, both ancient and modern. Many pictures have been drawn of ideal societies in which communism was the outstanding feature. Plato, in his "Republic," pictured such an ideal commonwealth; not only was all wealth to be held in common, but wives and children likewise. Defective children, or children who seemed likely to be a burden rather than a help to the state, were to be disposed of in early infancy. Sir Thomas More, in his "Utopia," presented another picture of an ideal society based upon communism. In order to give an impression of reality he pictured some travelers in South America who had discovered a new country, in which communism prevailed. Francis Bacon gave us a somewhat fragmentary picture of his ideal of society in his "New Atlantis." Tommaso Campanella, in "The City of the Sun," and various other writers have kept alive the ideal of a communistic society. In more recent times we have such books as "News from Nowhere," by William Morris, "The Coöperative Commonwealth in its Outlines," by Laurence Gronlund, and "Looking Backward," by Edward Bellamy. This is a list of distinguished writers, and their books make attractive reading. They show pretty clearly how persistently the world has dreamed of social conditions in which there should be no rivalry of interests, no quarreling and bickerings over questions of property,—of mine and thine.

It is not very difficult to show where these pictures are defective and how impractical such schemes of social organization are. The world at large, or at least a great majority of the people of the world, has put very little confidence in these proposals, but probably no generation has been without a certain number of spirits who have retained their belief in those peculiar ideals of justice and economy which these Utopian works have set forth.

Experiments. *The primitive Christians.* Nor have actual experiments been wanting. The primitive Christian Church is frequently referred to as an example of communism. One or two passages in the Acts of the Apostles indicate that the first

Christians, at least, maintained a communistic fund for the maintenance of impecunious members. For a short time they appear to have put practically all their possessions into a common fund. But in addition to this they stopped working and remained together in one place, awaiting the second coming of the Lord. This makes it appear as though communism had not been with them an ideal scheme of social organization but merely a convenient arrangement by means of which they could live while preparing for the end of the world and their sudden translation to heaven.

The Spartans. The Spartan commonwealth is likewise referred to frequently as a communistic society. According to the account given in Plutarch's "Life of Lycurgus," there were many communistic features about the life of the Spartans. It appears to have been the communism of a military camp, however, for the Spartans themselves were only a small clan, or caste, ruling over a much larger population of subject people. In order that they might be strong in a military sense and hold the masses of the people in subjection they organized themselves very much as a military camp has always been organized. There was no communism whatever for the mass of the people. It extended only to the small aristocratic and ruling class called Spartans.

The monasteries. Most of the monasteries of the Middle Ages were organized on a communistic basis. They also practiced celibacy, showing that they did not regard communism as the ideal basis of a continuing human society. The whole monastic life was organized for the purpose of promoting spirituality rather than for the purpose of reforming human society.

The Taborites. Certain extreme sects among the early Protestants attempted some kind of communistic life without celibacy, but never made much of a success. Conspicuous among these were the Taborites, an extreme faction of the followers of John Huss, the Bohemian reformer. They withdrew from the city of Prague and started a community on a hill to which they gave the name Mount Tabor. They hence became known

as the Taborites. So long as they were thoroughly united by their religious sentiments they worked very successfully, not only in productive industry but even in war, for the great Austrian Empire sent army after army against them. They defeated the imperial armies because of the superiority of their organization. But eventually dissensions arose among them; they were divided and overthrown, and their community was broken up.

American experiments. America has been a fruitful field for the trying-out of all sorts of experiments. Many of the first colonists came here because they were inspired by religious sentiments. They founded colonies where their religious ideas could flourish. This continent presented a virgin field where people with peculiar ideals of religious organization or of social economy could come and put their ideals to the test.

The outline on the following page gives a rough classification of the more important of these experiments. There were many not included in this list, which were either unimportant as to numbers or so short-lived as to make them unworthy of mention. It will be noticed that the long-lived communities were all religious in their nature. Of the nonreligious communities only one (namely, the Icarians) lasted a single generation, whereas several of the religious communities have lasted half a century, and one group of communities (namely, the Shakers) had several colonies that survived for more than a century.

Religious communities. Most of the religious communities, it will be noticed, are of foreign origin, and most of these are of German origin. The Shakers are placed among those of American origin. As a religious sect the Shakers originated in England, but they made their experiments in communism in this country. They have established numerous colonies from Maine to Kentucky. They are celibates and therefore could have no continuing existence unless they continued to make converts. This they have failed to do in recent years, and consequently the Shaker communities are dying out as the old people drop away.

- American[1] Communistic Society
  - Religious
    - Of American origin
      - The Shakers (numerous colonies) Maine to Kentucky, 1787–
      - The Perfectionists of Oneida, N.Y., 1848–1879
      - Zion City, Ill., 1890–1896
      - Jemima Wilkinson's New Jerusalem, N.Y., 1786–1820
      - Celesta, Pa., 1852–1864
      - Salem-on-Erie, N.Y., 1876
      - The Woman's Commonwealth, Texas and Washington, D.C., 1880–
      - The Lord's Farm, N.J., 1877
      - Shalam, or the Children's Land, N. Mex., 1884–1901
      - Estero, Fla., 1904
      - The Christian Commonwealth, Ga., 1896
      - The House of David, Mich. (?)
    - Of foreign origin
      - Ephrata, Pa., 1732–
      - The Harmonists, Pa., 1803–
      - The Separatists of Zoar, Ohio, 1819–1898
      - The Amana Society, Iowa, 1843–
      - The Bishop Hill Colony, Ill., 1846–1862
      - The Bruederhof Communities, S. Dak., 1862
      - The Waldensian Colonies, N.C. and Texas, 1893–
      - St. Nazianz Colony, Wis., 1854
  - Non-religious
    - Owenistic
      - New Harmony, Ind., 1825–1827
      - Yellow Springs, Ohio, 1824
      - Numerous others
    - Fourieristic
      - Brook Farm, Mass., 1841–1847
      - Fruitlands, Mass., 1843
      - Hopedale, Mass., 1841–1858
      - North American Phalanx, N.J., 1843–1856
      - Wisconsin Phalanx, Wis., 1844–1850
      - Northampton Association, Mass., 1842–1846
      - Numerous others
    - The Icarians
      - Nauvoo, Ill., 1849–1866
      - Cheltenham, Mo., 1858–1864
      - Icaria, Iowa, 1860–1895
    - Independent
      - Skaneateles Community, N.Y., 1844–1846
      - Polish Colony, Anaheim, Calif., 1876–1878
      - Topolobampo, Mexico, 1886–1901
      - The Ruskin Commonwealth, Ga., 1896–1901
      - The Coöperative Brotherhood, Wash., 1898–
      - Equality Colony, Wash., 1899–
      - The Straight Edgers, N.Y., 1899–
      - The Helicon Home, 1906–1907–

[1] This outline is based on "American Communities," by W. A. Hinds. Chicago, 1908.

The Perfectionists originated in Vermont under the leadership of Mr. John Humphrey Noyes. They afterwards moved to Oneida, New York. They have given up communism and have organized themselves in the form of a joint-stock society and are still prosperous and doing a thriving business.

A multitude of other experiments of a more or less religious nature have been carried out by faith healers, Adventists, and other people of rather extreme religious views.

Of the religious communities of foreign origin, that at Ephrata, Pennsylvania, was the first to be organized on a durable basis in this country. Like the Shakers, they were celibates and were therefore doomed to ultimate extinction.

One of the most successful of all these experiments was started in western Pennsylvania by some German pietists among the followers of one Georg Rapp, from whom they were given the name of Rappists. They afterwards moved to Indiana, where they sojourned for a time at New Harmony, in the southwestern corner of the state. After a few years they sold out and moved back to Pennsylvania. Their colony, known as Economy, was a place for sightseers for many years.

The Separatists of Zoar and the Amana Society were somewhat similar in their origin and in their subsequent history. They did not practice celibacy. They prospered amazingly and presented a very attractive life as seen by visitors from the outside. They were animated by intense religious enthusiasm and devotion to their own leaders. The Separatists of Zoar, however, gave up communism in 1898, largely because the younger generation had lost something of the religious zeal of the older generations and decided that they preferred the individualistic type of life to the communistic. The Amana Society is still flourishing, and the people are apparently satisfied.

The Bishop Hill Colony in Illinois was a Swedish colony. In character and organization it resembled most of the others. When its members lost their intense religious zeal they likewise lost their enthusiasm for the communistic type of life and gave it up.

A series of communistic societies is still flourishing in South Dakota. They are known as the Brotherhood Societies.

Several communities of North Italian Protestants have flourished in the South, particularly in Valdese, North Carolina, and near Gainesville, Texas.

Nonreligious communities. In 1822 Robert Owen, a great English philanthropist and a firm believer in what was then called socialism, came to America for the purpose of establishing an ideal community. He delivered many addresses and created much enthusiasm. In looking about for a location he found that the Harmonists, who were then living in New Harmony, Indiana, were desirous of selling out and moving back to Pennsylvania. He bought all their real estate and proceeded to establish a colony of his own. He was a man of great ability, who had made a fortune of his own, which he devoted liberally to the propagation of his ideas. His colony, however, was made up of idealists who were more in the habit of talking about their theories of society than of working to produce wealth; it was a good illustration of the inability of any community to live on talk. It lasted a little over two years. Numerous other experiments of the same kind were tried, none of which lasted for a single year. One at Yellow Springs, Ohio, lasted for several months.

About 1841 the works of a French communist, Fourier, were translated and published in this country. They created great enthusiasm, and a large number of experiments were made. The most notable of these was Brook Farm, Massachusetts, which was started independently but afterward adopted the plan of Fourier. This experiment was notable mainly because of the great names in its list of members. Some of the most distinguished men and women of that day, in letters and in scholarship, joined the Brook Farm community. The most successful of the Fourier experiments, however, was the North American Phalanx in New Jersey. It lasted for thirteen years. An experiment at Hopedale, Massachusetts, was only partially

communistic; it lasted seventeen years and then became a joint-stock association.

As indicated above, the most successful of all the nonreligious communities in this country was the Icarian community in Iowa. Its members were followers of Étienne Cabet, a French communist, who wrote a very attractive book entitled "A Voyage in Icaria." It awoke the slumbering idealism of many French people who desired to form a commonwealth after the description of the life of the Icarians. Cabet led his followers to this country and landed in New Orleans, hoping to establish them in northeastern Texas. The land proved to be inaccessible and the climate not very agreeable. They returned to New Orleans discouraged, but learned that the Mormons had recently been driven out of Nauvoo, Illinois. They proceeded by boat to Nauvoo and established themselves, finding plenty of vacant houses and factory buildings. Here they prospered for a number of years, but they wished to find a situation where they could be more to themselves, and a tract of land was bought in southwestern Iowa, not very far from the present town of Corning. There they lived under the communistic system until 1895, when they gave up communism and came over to an individualistic régime.

A large number of other societies have been established by the followers both of Robert Owen and of Fourier and, in recent years, by the admirers of Laurence Gronlund and Edward Bellamy.

Results. It may seem as though the experiences of these numerous communistic societies tended to throw discredit upon all communistic ideals. The advocates of communism, however, insist that the principles of communism are still sound, even though a thousand communities have failed. To an impartial observer it looks as though communism might work very well if people were built on a communistic plan. If they have a passion for communism, or a powerful religious emotion which will overcome their individualistic and particularistic tend-

encies, they may live together peaceably under communism. Unless they are inspired with religious zeal or a genuine passion for communism, it seems as though the natural individuality, not to say the contrariness, of human nature would continue to break up all communistic societies in the future as it has in the past.

But why, it may be asked, will not communism work in a large national group as it now works in a small family group? It does not seem to work particularly well in *some* families. In those few abnormal cases where the members of the family have no particular affection for one another, the question of the division of the family funds is a difficult one. If the father is selfish and cares nothing for the others he becomes an autocrat and spends all or the greater part of his income upon himself. If the others feel the same way toward him and one another they quarrel among themselves. But in a normal case, where an intense affection for one another prevails, there is no quarreling and everything is shared in common.

If it were possible for the members of a large national group to feel toward one another as do the members of a normal family, communism or almost any other system might work well. But the average man's capacity for affection is limited. It would take one with a genius for friendship to feel a warm affection for even a hundred separate individuals, to say nothing of a hundred million. It would be practically impossible for any of us to feel toward each and every one of a hundred million people, only a few of whom we had ever seen, precisely as we do toward our own brothers and sisters, fathers and mothers, and other very near relatives. This is sufficient reason why communism cannot be made to work well.

CHAPTER LIII

ANARCHISM

In some respects anarchism is the diametric opposite of communism and almost the diametric opposite of socialism; in other respects it is somewhat similar to both. Anarchism and socialism represent opposite tendencies in that the socialist proposes to enlarge the power and function either of the state or of some kind of public organization, whereas the anarchist proposes to eliminate all authority, or all control of one person by another. Such organization as shall exist under anarchism shall be purely voluntary. Voluntary groups may be formed as large or as small as the individual members care to have them. The relations of one group to another shall likewise be on a purely voluntary or contractual basis. There shall be no state with a military arm or with police power of any kind.

Anarchism and socialism resemble each other in that both revolt, either in part or in whole, against any system which gives one man power or authority over another. Many of the advocates of socialism object to private capital primarily on the ground that it gives one man (namely, the capitalist employer) power and authority over another man, the propertyless laborer. The anarchist says, regarding this opinion: "It is good so far as it goes. We anarchists are likewise opposed to giving one man power or authority over another. The private ownership of capital does what the socialist says it does, and that is wrong. We are therefore opposed to the private ownership of capital. But capital is not the only source of authority. The government likewise gives one man power or authority over another; the capitalist employer does not in fact have as much power or authority as a judge or a policeman, a governor or a president. The socialist, therefore, is only a halfway anarchist. He is

opposed to one source of power and authority; we are opposed to both sources."

May government eventually become unnecessary? The underlying philosophy of anarchism is of various kinds. There is one system of thought which is frequently but improperly called anarchistic. It is held by certain people that government and compulsion are made necessary by the imperfections in human nature,—that if we were so highly developed morally that each individual would voluntarily do what he ought to do or what was in the public interest, then it would not be necessary to use authority or compulsion on anybody; but that since there are individuals with undeveloped moral natures,—individuals who do not voluntarily and automatically respond to the needs of society,—it is therefore necessary that they be compelled to do what they ought to do, or (which is the same thing) what they would do if they were fully developed.

In the closing paragraphs of his monumental work on sociology, which was in turn the culmination of his great system of synthetic philosophy, Herbert Spencer[1] sums up his ideas as to the ultimate end of all social progress in the following eloquent words:

> But if the process of evolution which, unceasing throughout past time, has brought life to its present height, continues throughout the future, as we cannot but anticipate, then, amid all the rhythmical changes in each society, amid all the lives and deaths of nations, amid all the supplantings of race by race, there will go on that adaptation of human nature to the social state which began when savages first gathered together into hordes for mutual defence—an adaptation finally complete. . . .
>
> On the one hand, by continual repression of aggressive instincts and exercise of feelings which prompt ministration to public welfare, and on the other hand by the lapse of restraints, gradually becoming less necessary, there must be produced a kind of man so constituted that while fulfilling his own desires he fulfils also the social needs. . . .

[1] The Principles of Sociology (second edition), Vol. III, pp. 598–601. London, 1897.

Long studies . . . have not caused me to recede from the belief expressed nearly fifty years ago that—"the ultimate man will be one whose private requirements coincide with the public ones. He will be that manner of man who, in spontaneously fulfilling his own nature, incidentally performs the functions of a social unit; and yet is only enabled so to fulfil his own nature by all the others doing the like."

Whether this delectable state is to be reached by the slow and somewhat cruel process of evolution, as Spencer believes, or by the process of moral reform and religious evangelism, may be open to speculation. There are probably not many people who disagree with the general conclusion that government would be unnecessary in either case. If (but this is a large "if") human nature could be so perfected, either by the slow elimination of the unsocial and the antisocial (that is, the criminal and the immoral) or by their moral regeneration, it might very easily follow that government would ultimately become unnecessary, or at least that compulsion by governmental authority would become a thing of the past. This position, however, can hardly be called anarchistic in any real sense, for the real anarchist believes not that government may ultimately become unnecessary but that it is now unnecessary.

Impatience of restraint. There is another type of thought, sometimes characterized as anarchistic, which does not revolt so much against government and the use of compulsion in the form of police power as against what is called moral compulsion; that is, the setting up by society, or by people in authority, of standards which others are bound to follow. It is proposed, therefore, that we throw off the so-called shackles of conventionality and even of morality, and that everyone do that which is right in his own eyes, regardless of what may be said by other people or by institutions and organizations which pretend to tell us what we ought to do.

Is morality an invention of weaklings to curb the strong? Among the people who take this point of view, however, two diametrically opposite conclusions are reached. There is one

school represented by such writers as Kaspar Schmidt and Friedrich Nietzsche, who hold that religion and morality are the inventions of the weaklings of the world for the purpose of holding the strong in check. There is an old fable regarding the mice who found themselves oppressed by the cat. They voted unanimously that the cat should wear a bell in order that the mice might be protected. According to these writers religion and morality are merely different ways by which mice try to put the bell on the cat. They try to make it unpopular for the strong man to use his strength. They persuade him that it is immoral or irreligious, or that the vengeance of supernatural agencies will be let loose upon him if he exercises his strength to the detriment of the masses. Therefore the strong man, sometimes called the superman, should break loose from these conventionalities, should snap the cords with which the Lilliputians have bound him, and should dare to be great and independent, and impose his will on the masses if he is able to do so.

Is morality an invention of those in power to curb the masses? The other school of anarchists, and certain socialists who are anarchistic in spirit if not in program, assert that religion and morality are the cunning inventions of priests, soldiers, and capitalists for the purpose of holding the masses in check; that for the average man to be good is merely to be good for somebody else—that is, for those in power; that to be good is to support the priest or the capitalist or the policeman or the judge or someone else in authority; that to be free is to be good to oneself.

As to which of these two conclusions is the more absurd, it would be difficult to decide. They are mentioned to show to what extremes of aberration the human mind is capable of going. One doctrine would lead the strong man to do as he pleased, to impose his will upon his neighbors either by the weight of his fist or by his superior power of destruction in some other form; the other conclusion would lead the masses of the people to sink into a state of license and violence which

would destroy civilization and land us in a sort of primeval social chaos.

Are all human interests harmonious? There is, however, another system of thought which is truly anarchistic and less repulsive than either of these. This system is based on the fundamental assumption that all human interests are harmonious. In this best of all possible worlds, it is claimed, there can be no such thing as a conflict of human interests; it is in some way a reflection upon the Creator of the world to say that there could be anything but a harmony of real interests among men; it cannot possibly be true that one man's meat is another man's poison; these apparent conflicts are the creation of men and human institutions and are not inherent in the nature of man and the universe.

This underlying assumption sounds attractive, and doubtless many of us would like to believe it if we could. There are, however, so many hard facts in the way that not many of us are able to bring ourselves to the point of ignoring the very present and prevalent conflict of interests. It was shown in the chapter on Scarcity that the mere fact of a congestion of population—of too many people's trying to live in one spot—creates in that spot a state of scarcity. Food enough in that particular spot cannot be produced for as many people as would like to live there. This situation in itself inevitably and necessarily produces a conflict of interests. Either some people must move to another spot or food must be brought from other spots to feed the people who are there. Either alternative will prove disagreeable to somebody. If neither of these alternatives is chosen, then there must be hunger; more than one person will be wanting each parcel of food, and this in itself is a conflict of interests. Here are certain facts of a physical nature which cannot by any effort of the will or the imagination be conjured out of existence. There is, in fact, a conflict of interests wherever two people want the same thing.

Conflict of interests makes control necessary. Wherever there is a conflict of interests, one of two things is absolutely nec-

essary: either the individuals must have a high moral development, which will lead each one to surrender certain interests in favor of others, or there must be an umpire to decide between them and enforce his decision. This umpire, by whatever name he may be called, exercises the function of government. In fact, this umpire *is* government, whether it be an individual or a great organization of individuals exercising various functions, such as legislation, administration, interpretation, enforcement, and so on.

Emotional anarchism. There is another type of anarchism which can scarcely be said to have any underlying philosophy. It is based wholly on feeling and sentiment. Doubtless every human being possesses some repugnance toward being ruled,—toward being compelled to do that which he dislikes to do, or to leave undone that which he would like to do. A preference for one's own way shows itself rather early in the lives of children. Doubtless all of us feel bitter at times regarding some act of some governing agency or authority. Generally, however, we are able to keep these feelings under sufficient control to enable us to obey the law and support the government. In other words, we generally see the necessity of government, however disagreeable it is at times to be forced to submit. Occasionally, however, an individual will react in the other way; that is, his repugnance will overcome his judgment. He has no particular philosophy, though he can always invent a reason or an excuse. A policeman, a court, a flag, or any other evidence or symbol of government is as a red flag in his face; it causes anger, resentment, and insurgency, and nothing else. Such people are sometimes very likable in other respects. So long as their feelings are properly soothed they may be exceedingly amiable and even affectionate. Those who know them personally find it difficult to reconcile their general personal qualities with their feeling against government. Nevertheless, from any broad and philosophical point of view they are among the most dangerous members of society. They are the unadapted in a very important social and psychological sense.

Psychologically they are as unfit for living under a settled, orderly government as a fish is physically unfit for living out of water. The process of evolution which, according to Spencer, would eventually produce the delectable state of society described in the above extract is steadily weeding such people out. They insist on bumping their heads against the walls of the universe and destroying themselves along with the criminals and others who are unadapted to a settled civil life. If by the meek we mean merely the adaptable, the teachable, and the reasonable, and if by the unmeek we mean the intractable, the unteachable, the self-willed, the pig-headed, then it is probably a scientific proposition to say that the meek "shall inherit the earth"; that is, survive, while the unmeek shall be exterminated by the slow but sure process of evolution. This will be the ultimate cure for this type of anarchism.

There is still another type of anarchist who is merely mean and bent on making trouble. He can always be relied upon to be on the wrong side of every question. Wherever decent, self-respecting men and women are in general agreement on any subject, he will always be found opposing them. It is true he does not always go in for anarchism. He is found in every movement which gives him a chance to vent his general hate and spitefulness. Wherever there is a chance to denounce government, religion, law, order, morality, chastity, sobriety, or anything else that is of good report, his voice is always heard. He generally tries to get into good company by calling himself a radical, an iconoclast, or a revolutionist, knowing that excellent men and women have been called by all of these names. He is only another type of that numerous class which cannot stand even the moderate degree of civilization to which we have attained, and would, if he could, drive us back to savagery.

Is patriotism a vice? There are various other views, some of them of an idealistic nature, which savor of anarchism and lead to absurd conclusions on practical subjects. One of these is that patriotism is a vice. This strange doctrine is advanced on grounds of the broadest humanitarianism. We should love

all men equally, it is urged, without regard to race, color, creed, or nationality. The patriot cares more for his fellow citizens than for the citizens of other countries; therefore, according to this type of anarchism, he is narrow in his views. Moreover, if he thinks more of his fellow citizens than of others, this will lead him, in case of war, to try to kill the citizens of the enemy country. Killing, it is argued, is murder. The fact that it is done as an act of war does not in the slightest degree change its character.

When a great world state exists, then, of course, it will be proper to be patriotic toward it. We may even work consistently for it. But to condemn all patriotism for lesser states would, if this condemnation were effective, merely destroy existing states and all law and order and plunge the world in chaos. Family sentiment is narrow in the same sense that national sentiment is narrow. The man who loves his wife must care more for her than for other women. This and all other forms of family sentiment may, in a sense, make us narrow, but it does not follow that it is unwise or uneconomical to be narrow. Again, if we are to avoid narrowness, why be humanitarians? Are not many animals also companionable and lovable? To show a preference for men as against animals or even microbes is to be narrow in the sense in which these people have been using that word.

CHAPTER LIV

THE SINGLE TAX

Meaning of the single tax. By the single tax is meant a policy under which all the public revenue is to be raised by the single tax on land value. One of the most persistent misinterpretations of the single tax is that of assuming that it means a tax to be raised on real estate rather than on land values. Land value is defined as the value of the land itself irrespective of all improvements, such as ditching, draining, fencing, the planting of trees, and the erection of buildings. In short, everything done on the land itself to improve the value of an estate is classed as an improvement and, under the single tax, would be exempt from taxation. This leaves nothing except the location value and the fertility value to be taxed.

The physiocrats, believers in the "rule of nature," believed in the *impôt unique*. The original advocates of the single tax were a group of French economists called physiocrats. It was their belief that land was the original and fundamental source of all wealth, and that the rent of land was the only real surplus wealth which the community ever produced. From their point of view, rent was due to the bounty of nature. They believed that every other tax must eventually be paid out of rent anyway, wherever it may have been laid by the government. If we tax the products of industries, there is no surplus out of which the tax can be paid; as a result we either raise their price or depress the price of the raw materials. If we tax labor we must raise wages accordingly; if we tax enterprise we must raise profits. Every tax, therefore, is shifted from one to another till it reaches the landowner, who alone has a surplus out of which it can be paid. The landowner cannot shift it any farther, and, since he must ultimately pay the tax, the physiocrats argued that it was better for him to pay it directly in the

first place than indirectly after several shiftings from one person to another. They regarded the single tax as a good system of taxation for raising revenue, not as an engine of social reform.

The classical economist regarded rent as a peculiar income. The idea that landowners who live entirely upon the rent of land are in a peculiar sense nonproducers is by no means new. Adam Smith[1] wrote, in 1776, "As soon as the land of any country has all become private property, the landlords, like all other men, love to reap where they never sowed, and demand a rent even for its natural produce." And again, "They [the landlords] are the only one of the three orders whose revenue costs them neither labor nor care, but comes to them, as it were, of its own accord, and independent of any plan or project of their own."[2] Economists from Adam Smith down have generally agreed on this point, though they have not generally agreed that this is the great cause of poverty, nor that the abolition of ground rent would be a social panacea.

Ricardo, in developing his theory of rent, laid emphasis upon the fact that rent arises from the niggardliness rather than from the bounty of nature, thus taking a position opposed to that of the French physiocrats. This niggardliness shows itself in two ways: first, the best land is always limited in area; second, its productivity is limited. On any given area the amount of any crop which can be produced is limited; and even before that limit is reached, diminishing returns are received from successive applications of labor and capital. Because of these limitations upon the productivity of the best land, poorer and poorer land must be taken into cultivation as the demand for products increases. The fortunate possessors of the better grades of land are then in a position to demand a rent for their land.

The single tax made an engine of social reform by Henry George. It was the late Henry George, in his book entitled "Progress and Poverty," who seized upon these ideas to make

[1] Wealth of Nations, Bk. I, chap. vi.
[2] Wealth of Nations, Bk. I, chap. xi.

the single tax an engine of social reform. He began his inquiry by pointing out that even in the midst of plenty, poverty still persisted. He stated that though the productive power of the world had increased many fold through mechanical improvements, nevertheless large numbers of people remained in poverty. In fact, he went so far as to insist that increasing numbers were compelled to live in conditions of increasing squalor.

The persistence of poverty the great reproach upon civilization. This phenomenon of the persistence of poverty in spite of the world's increase in productive power has been an enigma ever since the rise of mechanical industries. Various answers have been given to the puzzle. Karl Marx and his followers attributed it to the fact that the owners of capital absorb all the benefits of the increase in productive power, leaving the nonowners of capital no advantage whatsoever.

It is very easy to say—in fact, it looks like mere arithmetic to say—that, with the same rate of productiveness, if certain classes who are now receiving large incomes should not receive them, there would be more left for other people. If the incomes of capitalists and landowners were cut off, more would be left for the laborers, provided the total production remained the same. It would be equally true from an arithmetical standpoint to say that if the skilled laborers and the high-salaried people did not receive so much, more would be left for the rest, if the rate of production remained the same. In other words, if one assumes a given rate of production, and then assumes that the incomes of certain classes are cut off, one can demonstrate that this would leave more goods for the other classes. This, however, is not a convincing argument. If anyone performs an important function in society, and thereby makes society richer, it cannot be said that by cutting off this person's reward for performing his function, society will be improved. By the cutting off of his reward there is the danger of killing the goose that laid the golden eggs: by so doing we may reduce his motive for labor and cause him to perform a less important function than he would if he were adequately rewarded for his

effort. The real question is, therefore, whether the capitalist performs a function in society commensurate with the reward which he receives. If the answer is in the affirmative the cutting off of his income would hardly be a help to society. The same reasoning applies to the landowner: if he performs a function commensurate with the reward which he receives, it would obviously not help matters to cut off his income. So here again the real question is whether or not the landowner performs a function commensurate with the reward which he receives.

Distinction between location value and fertility value. In Chapter XVI we saw that the two economic factors in land value are location and fertility. In so far as the value of land is based primarily on its fertility, that value may be easily destroyed and with difficulty replaced; and in fact the land of little fertility may, by careful and scientific farming, be greatly increased in fertility. This increase would be classed as improvement, and the increase in value would be similar to the increase which results from ditching, draining, irrigating, fencing, clearing, and other forms of improvement. Even where the land possesses original fertility (that is, where it is known as virgin soil) it may easily deteriorate under bad management or improve under good management. It is as much in the interest of society that good land be kept from deteriorating as that poor land be improved in fertility. If the owner of land is allowed the advantages of any improvements in fertility which result from his management, no one could of course consistently object to it. Again, if he is made to suffer some penalty for allowing the land to deteriorate in fertility by his bad management, it would seem equally just.

Putting these two propositions together, it seems as though the owner of the land, whether it be good or poor land, should be rewarded for any improvement resulting from his good management and penalized for any deterioration resulting from his bad management. If the single tax were applied rigidly, and the value not only of the location but of the soil itself were taxed away, the owner would get neither reward nor pen-

alty. That is to say, if he were taxed for the full value of his land, while the soil possessed its original fertility, he could easily "mine" the soil, as it is called; that is, he could rapidly exhaust the fertility and pocket the temporary advantage from it. Then, after the land became less valuable, the tax would have to come down or the owner could abandon the land or turn it over to the state whenever it became so poor as not to be worth the tax.

But if he is allowed the full value of the fertility of his soil he has a much stronger motive for preserving or increasing its fertility. In the pursuit of this advantage, or in the warding off of the disadvantage of deterioration, he performs an important public function,—that of conserving the fertility of the soil. His reward will bear some ratio to the value of the service which he performs. To cut off his reward would not be to the advantage of the public, because the result would be that he would allow the soil to deteriorate, and this would result in a smaller production. The rest of society would suffer from this policy along with the landowner. The single tax would put the owner in the position of a tenant who had to pay the state, in the form of a tax, all that the land would rent for. Tenants are notoriously and for excellent reasons careless in the matter of conserving soil fertility.

In respect to location value this argument scarcely applies. In some cases, it is true, the enterprise of the landowner has created location value. This occurs when he himself builds a road instead of asking the public to do it, or when he beautifies a spot and makes it attractive as a place for dwellers, or when he builds a trolley line or any other means of access to his land. He may then be said to have created the location value of his land. In such cases all that we have said regarding fertility value will apply also to location value.

In most cases, however, the location value is not the creation of the individual owner but of the general public, since it is the general public, rather than the individual owner, that builds schools, libraries, and streets, maintains police systems, and

brings various utilities within reach. Many notorious cases are cited of men who have bought land favorably situated and have done nothing to improve it, having even resisted taxation and all improvements. Yet in spite of such inertia these men have found themselves rich as the result of the rise in the location value of the land. A few such conspicuous cases furnish popular arguments in favor of the single tax, though they are of no great scientific value unless they are numerous enough to absorb an appreciable fraction of the national wealth.

A land tax not necessarily a single tax. The arguments for a single tax are not the same as for a mere increase of the land tax. One may favor the increase of taxation upon the location value of land without being in any sense of the word a *single*-taxer. He may believe in many different taxes, such as the inheritance tax, licenses, the income tax, etc. It would be absurd to call such a man a single-taxer, even though he favored a special tax on the location value of land. Again, even though one were in the strict sense of the word a single-taxer, one might advocate it on purely financial grounds rather than on the grounds of social reform; that is, one might believe that all public revenues should be raised from the taxation of location values of land merely because he believed that this would be an easy way of raising revenue, and not because it would go very far toward the curing of poverty.

The financial arguments in favor of the land tax are fairly simple. Land cannot be hidden in the way that much personal property is. There may be some difficulty in appraising its value for purposes of taxation, but the difficulty is not greater than that of appraising for purposes of taxation the value of personal property, buildings, or anything else which is taxable.

Again, a tax on location values could hardly be said to have a repressive effect at all. If the tax on the products of industries tends to discourage production, this cannot be said to be true of land. Since location values are not produced by the payer of the tax, there is no production to discourage. You may tax land and still have it in undiminished quantities. As a cold-

blooded financial proposition this has some merit. Even though one may take away from the landowner all its location value, the land itself still exists in undiminished quantities, and its productivity is in no way affected.

Arguments for the single tax. The argument for the single tax as an engine of social reform rests on three general propositions. In the first place, since those who receive rent because of the location of their land create nothing in return for the rent they receive, their incomes are merely subtracted from those of the rest of society. If their incomes should be taken away, this would not in any degree diminish the total productiveness of the community. By a mere process of arithmetic it is easy to show that if the incomes which they now receive were divided among the rest of the people, these other people would have larger incomes.

Is land kept out of use for speculation? In the second place, it is alleged that a great deal of land is kept out of use for speculative purposes and that a high tax on land values would force this land into use. The validity of this argument is doubtful. The illustrations given are usually those of tracts of land found lying idle in cities and suburbs. The owners are holding them apparently in the hope of getting a higher price in the future. It is easy to jump to the conclusion that if there were no prospect of gain by so doing, the owners would at once find a use for the land or sell it to others who could use it; but this does not take into consideration the fact that there may be no immediate use to which the owner could profitably put the land.

If an individual, Jones by name, has a tract of land which is not being used, there is no reason for believing that he would be averse to getting some income year by year while the land itself is rising in value on his hands. Thus he would get the rise of the value of the land just the same as though it were idle, and he would get, at the same time, whatever income it would bring him. There are not many men who deliberately prefer a smaller to a larger income. If he knew that by putting

$1000 into even a small building or $100,000 into a large one he could rent the building for enough to pay the interest on what it cost him, together with insurance, deterioration, etc., and have left even a small sum in addition, he would certainly be willing to have the small additional sum. If, however, he did not see the opportunity to use or rent such a building, but, on the contrary, foresaw that he would be obliged to lose a part of the interest, insurance, or deterioration, there would be no motive for him to have it built. In that case, even if he had to pay the single tax, he would still leave the land idle. He would rather pay the single tax without additional loss than to pay it and incur an additional loss besides.

The only common cases in which the land is actually kept out of use because of speculation are where garden land is purchased and divided into building lots in advance of the demand for them. After the division has been made the land is no longer suitable for farm land or garden tracts because it is broken up into parcels too small to be cultivated economically. Meanwhile the public may be slow in buying the lots for building. The result is that for a number of years this land practically goes to waste.

A heavy tax on land would exempt other forms of property. A third argument for the single tax is to the effect that when a large amount of revenue is raised from a tax on land, there is no necessity for so high a tax—probably no necessity for any tax whatever—on other things. This reduction of taxation on other forms of property would serve as a stimulus to greater production. When, for instance, a farmer finds that his cattle, his crops, and his buildings are not taxed, or not taxed so heavily, he is encouraged to develop these forms of property. If, as stated above, the taxation of location values of land enables the public to raise enough revenue from this source and thereby to eliminate the taxes on all other things, this will tend to stimulate business and production in general. This argument is based on the repressive character of other forms of taxation than the land tax.

It is probably true that if the incomes of landowners which come to them in the form of rent or location value were cut off, more would be left to divide among others; that if land values were taxed away, a few owners would be forced to use land which is now idle; and that if a heavy tax were put on the location value of land, the taxes on other things could be greatly reduced, thereby stimulating production. The combined result of these three things would be to the profit of the nonlandowning classes. The unskilled laborers and other poor people would probably gain a fraction of this general advantage, along with all other nonlandowning classes, such as merchants, bankers, manufacturers, professional men, and skilled laborers; but that it would greatly alleviate poverty is a proposition which may be regarded as very doubtful.

Putting idle talent to work. A fourth argument, not usually brought forward by single-taxers, may be added to this list. In so far as certain owners of valuable land are enabled to live on the rent which comes to them because of its location value and to remain idle instead of doing productive work, the community loses the productive power of these men. This is more important than all the land kept out of use for speculative purposes. If such persons were deprived of their incomes and thereby forced to do productive work, the community would gain by this addition to its list of productive workers. This would make for national prosperity. How great would be the gain to be expected from this source would depend upon how many men of talent are kept out of productive work by reason of their ability to live idly on the rent which they receive from the location value of their land. If only a few such men are to be found the loss may not be worth considering. If there is a large leisure class supported mainly from the rent of land, it constitutes a serious drag upon the prosperity and progress of the country. If this class could be made to earn its living in useful work, it would be an important factor in national prosperity.

CHAPTER LV

THE LIMITS OF STATE INTERFERENCE

"There ought to be a law against it!" is a statement that we hear on every hand nowadays, regarding almost anything that the speaker does not happen to like. So long as this statement merely expresses the speaker's opinion that something or other ought not to be, or so long as it is merely an expression of his disapproval of something that is taking place, it does no harm; but when it is taken literally by voters and lawmakers they are likely to attempt to regulate a multitude of things by law which would be better left unregulated. To say, however, that a thing would be better left unregulated is not the same as saying that it is right or that it is working satisfactorily. It may merely mean that more harm will be done in trying to regulate it than the thing would do if it were left unregulated.

Some control necessary. It was shown in Chapter V that some degree of government control over individual conduct is necessary, first, because of certain conflicts of interest among individuals and, second, because of the incompetence of certain defective individuals or individuals of low mentality to look after their own interests. No economist has ever questioned the necessity of some government control over the activities of individuals. How far the state should go in its regulation and control of individual conduct is a matter upon which there is a wide difference of opinion. One school has inclined toward a restriction of government control to a few of the most important cases, leaving the individual of mature years and sound mind to find his own place in the economic system and to make his own economic adjustment to his fellows on the basis of voluntary agreement or free contract. Other schools advocate a general extension of the authority and control of the govern-

ment over more and more of the affairs of individuals, gradually enlarging the field wherein things are done under the system of authority and obedience and narrowing down the field wherein they are done by voluntary agreement among free citizens. The term *laissez-faire* is sometimes applied to the former school, implying that its followers believe in the "let go" or "let alone" policy of government. Various names are applied to the other schools, depending upon how far they propose to extend the field of authority and obedience or to restrict the field of voluntary agreement or free contract.

The *laissez-faire* school. We shall consider, first, the *laissez-faire* school and the underlying assumptions on which its policy must be based. There has been much misapprehension on this subject and not a little misstatement. A recent book, "Economics for the General Reader,"[1] by Henry Clay, states four assumptions as underlying the *laissez-faire* policy: (1) that of rational self-interest, or "that individuals in their economic relations can be relied on to pursue their own interest, and that their action will be rational and informed"; (2) that competition leads to the survival of the fittest, or "that competition in industry will result in the survival of the socially fittest"; (3) that wealth will ordinarily be the result of social service, or "that *as a rule* private wealth or property will be acquired only by service"; and (4) that market values and social values are identical, or "that market values correspond roughly with social values and are an adequate indicator of need for production to follow."

It may be true that there have been advocates of a *laissez-faire* policy who have made some or all of these assumptions. If one believed that government was omniscient and omnipotent and could without difficulty and without cost, either in the form of money, man power, or irritation, control human conduct in any way it saw to be wise, then the best reason one could give for government's keeping its hands off, or letting things alone, would be that things were working well enough

[1] Pp. 370–371. New York, 1919.

anyway and could not be improved even by such an ideally perfect government. If anyone saw anything going wrong or anyone doing that which was socially inexpedient, and if he understood that an all-wise and all-powerful government could, without cost or disadvantage of any kind, compel the individual to do that which was expedient, he could not reasonably do other than ask that the government act in the matter and correct the evil. If, for example, he were convinced that on the whole the cigarette or jazz music did slightly more harm than good, or that, if it could be eliminated without cost or disadvantage in any form, more good than harm would result from its loss, and if he believed that the government could eliminate it without harm or disadvantage of any kind, he would, as a good economist, demand that the government act in the matter and eliminate it. But if he believes that the government is not able to do any such thing without a great deal of cost, in the form of money, man power, irritation, or something else, it is an entirely different story. In the case of a vice that is not very destructive it might do more harm to try to repress it than to let it flourish; only in the case of a very destructive vice would it do more harm to allow it to flourish than the government would be likely to do in trying to repress it.

Politics no better than business. With such a view of government one may believe in a *laissez-faire* policy without making any of the assumptions mentioned by Clay. It would be quite as near the truth to paraphrase the charges against the *laissez-faire* theorists by charging the advocates of government interference and regulation with assuming (1) that voters are dominated by rational self-interest or that individuals in their political relations can be relied on to vote for their own interest, and that their voting will be rational and informed; (2) that political competition, or politics, will result in the election of the socially fittest; (3) that public office and political power will ordinarily be the result of social service, or that *as a rule* public office and political power will be acquired only by service; and (4) that political values (that is, power to get votes)

and social values are identical, or "that political values correspond roughly with social values and are an adequate indicator of need for production to follow."

At the end of the chapter on Protectionism it was shown that men, if left to themselves to buy and sell what they like, will frequently develop market valuations or prices which are not true indexes of social utility; but doubt was expressed as to whether politics was capable of correcting these evils except in extreme cases. A man may have a rather poor opinion of the average individual in business and his ability to pursue his own interest on the market, but if he has a still poorer opinion of the same average individual in politics and his ability to pursue either his own or the public's interest at the polls, he will very consistently prefer not to have average citizens in politics interfering too much with average citizens in business. Again, he might be exceedingly pessimistic as to the results of economic competition, believing that rascality and predation frequently succeed as against honesty and production; but if he is still more pessimistic as to the results of political competition, believing that rascality and predation succeed even more frequently in politics than in business, he will consistently regard unregulated economic competition as less evil than wholesale government interference. Again, he may believe that property and wealth frequently accrue to men who have not earned them by any corresponding social service; but if he believes that government offices and political power and influence still more frequently go to men who have not earned them by any corresponding social service, he may consistently prefer the results of economic competition to those of control by politics or by those who manage to get elected to office by political methods. Finally, he may see very clearly that market values and social values are frequently far apart; that many things of little real worth sell on the market at a high price and others of great worth at a low price; but if he sees equally clearly that ideas of no social value frequently have high value as vote-getters, and others of high social value have no value

at all as vote-getters, he may very consistently consider market values as a less unsafe guide to production than political values.

The question is not how much confidence one has in the wisdom or disinterestedness of the people but whether he thinks the people show greater average wisdom in their economic than in their political activities, or vice versa. The believer in a *laissez-faire* policy may believe merely that men generally show more wisdom or less unwisdom in their business dealings or economic activities than in their political activities, whereas the believer in a general policy of regulation must believe that men show more wisdom or less unwisdom in their political than in their business activities.

The case of free speech. The question of freedom of speech will serve as an example. It would be absurd to charge the advocate of freedom of speech with assuming that everyone who talks will talk intelligently or that his talk will be "rational and informed"; that competition in speech (that is, discussion) will always or generally result in the survival of the fittest ideas; or that talk that results in the greatest profit to the talker will ordinarily be the most useful to the community; etc. He may believe none of these things: he may be convinced that a great deal of foolishness results from freedom of speech, that infinite harm is done by some talkers who mislead the people. I doubt whether he could seriously contend that false or misleading talk or teaching does less harm than predatory business, and yet he may be a firm believer in free speech merely because he thinks that attempts by the government to interfere with it result in even greater harm. The argument may not be convincing to him when he is told that the government represents the people and that the people will vote for those officers who suppress certain talkers and against those officers who let them talk. He may not believe that the people voted wisely when they elected these official censors or refused to elect officers who would not act as censors. He may believe that the result of the people's votes in such cases will be worse than any that

would be likely to follow the policy of letting the talkers alone; that is, a *laissez-faire* policy with respect to speech.

No kind of freedom more sacred than any other. Possibly someone may resent the idea of comparing freedom of speech with freedom of business. Freedom of speech and of the press are sometimes spoken of as though they were in a class by themselves and not to be compared with other forms of freedom, least of all with freedom of enterprise or freedom to do business. I know of no sound reason for making such a distinction, unless the personal preference of the individual who is making the distinction be considered a sound reason. As a matter of fact, freedom to most of us means nothing more than freedom to do what we want to do. It takes an unusual person to prize freedom as an abstract principle or to grow enthusiastic over the freedom to do something that he had never cared to do or thought of doing.

Since different people want to do such different things, it follows that they develop very different ideas as to what freedom means. A great many Americans have been energetic and enterprising in business,—have loved to do things on their own initiative. Freedom to them has consequently meant freedom of enterprise. Others have loved to talk, to write, or to teach. These activities rather than business enterprise are their favorite modes of self-expression; consequently freedom does not mean much to them unless it includes freedom of speech and of the press. The enterprisers have not always been as zealous for freedom of speech and of the press as for freedom of enterprise, and the talkers and writers are often willing to sacrifice freedom of enterprise while contending vigorously for freedom of speech. Others care very little for freedom of speech and still less for freedom of enterprise. All they want is a weekly pay envelope. They would as soon get their pay envelope from a government as from a private enterprise and from one kind of government as from another. They are for any government that promises them a fat envelope with freedom to spend it as they please.

Freedom of self-indulgence. It is interesting and instructive to note how in certain foreign countries the claim is made that there is less freedom in America than there. Productive enterprises are much freer here than there; men are freer to seek their fortune in all sorts of useful employment here than there; there is much freer discussion of public questions, both in open forums and the public press; but here there is less freedom to indulge their animal appetites than they find at home. This is the only respect in which they are freer than we. Since we do not prize this so very greatly we are not conscious of any serious restrictions upon our freedom, but they doubtless feel much freer in their own lands than they would if they came here.

This tendency to prize freedom to do merely what we like to do, rather than freedom for everybody to do anything that is useful and to seek the legitimate rewards of his usefulness, seems to the *laissez-faire* theorist to explain why freedom makes such slow progress. To him it seems that we should clarify our thinking if we were to realize that no one kind of freedom is any more sacred than any other and that no kind is an end in itself. We should still further clarify our thinking and rationalize our policy, from his point of view, if we were to realize that each and every kind must meet the test of social utility, that no one is entitled to freedom to do anything that is contrary to the public good, that freedom to produce, freedom to consume, and freedom to speak and write are all alike and to an equal extent subject to that limitation. It seems to him that when we once clearly realize this, and when all of us begin working consistently for freedom in its larger sense rather than in its narrow, fragmentary, and personal sense, there will be a new birth of freedom.

This does not imply, however, that men, if left to themselves, will always do what is right or socially useful. They will do many things that are socially useless or even harmful. But to say that a thing is harmful or that it ought not to be done is not the same as saying that the government should repress it.

Government repression requires the use of force and generally a good deal of prying and espionage in order to find evidence. We may try to rob these things of their repulsiveness and make them as attractive as possible by introducing a kind of ceremonialism into judicial procedure, but to the *laissez-faire* theorist they are still repulsive and are to be used only where the thing they are trying to prevent is more repulsive than they. In many cases a socially harmful thing really does less harm if let alone than the government would do if it tried to repress it. Anyone who is convinced of this may very consistently favor a *laissez-faire* policy with respect to the thing in question. In short, *the only necessary assumption of a laissez-faire policy is that government regulation or repression is costly.* With this assumption agreed upon, the question then becomes, Are the results of repression or regulation worth as much as they cost? A more accurate and detailed statement of the question would be, Are the evils to be repressed greater than those that accompany the work of repression, and are the evils to be removed by regulation greater than those that accompany the work of regulation? When it is once understood that this is the question, the method of procedure must be to consider, appraise, and compare the evils on both sides.

Difficulty of measuring cost. Unfortunately there is no instrument of precision by means of which we can weigh or measure these evils. The appraisal must be largely a matter of judgment, and judgment must be largely a matter of temperament, sometimes of prejudice. Those who temperamentally or otherwise care greatly for freedom of consumption and see no serious evils connected with freedom to consume whatever one likes may decide against sumptuary regulations on what to them are purely utilitarian grounds. Others who see, or think they see, that certain forms of consumption are doing great harm may with equal consistency decide in favor of what seems the lesser evil of regulation or repression of those specific forms of consumption. Again, those who prize greatly freedom to talk or who think that it does not matter much if people are misled by

bad talk or false teaching will very likely decide either against any regulation or to limit the work of regulation to the most extreme cases, where, for example, the very life of the nation may be at stake. Others who do not see that freedom to talk is so very important or who believe that great harm results from bad teaching may be a little more liberal in their use of political power in the repression or regulation of speech. Finally, they who do not care greatly for material wealth, or who do not see that any great harm is done if a few men here and there do get more than their just share, may decide that the evils of unregulated business are not great enough to justify a large amount of interference; whereas those who care greatly about such things, who are deeply resentful if someone gets more than his share or, if not resentful on their own account, simply feel that it does great harm if a man here and there is getting too much, will naturally go in for more regulation.

Partly a matter of temperament. On the other side of the case something will depend also upon one's temperamental attitude toward government and its agents. One who does not feel that it is a very serious thing to have police officers and other agents of the government prying around, gathering evidence regarding possible violation of sumptuary regulations, espionage laws, factory acts, etc., is likely to be very complacent toward rather minute regulations. Others, who feel differently toward the government and its agents, are likely to feel more or less impatient toward any except the most necessary regulations.

These temperamental and emotional differences will always make it difficult for people to agree on the precise limits of government interference, but it is worth something to have the problem stated in terms of comparative cost and divested of unnecessary assumptions. Under the doctrine of comparative cost, of course, there is room for much variation. The evil to be repressed may, in some cases, be so great as to call for repression in spite of the clumsiness, inefficiency, or even the corruption of government. That is no more extreme than say-

ing that a material product may be so valuable as to justify its production, even though the instruments of production may be very poor and the actual cost may be four times the necessary cost. A product of considerable value, however, may not be worth its cost when the technique of production has not been developed, and may be more than worth its cost after that technique has been developed. Similarly, when the technique of control, regulation, and repression has been highly developed we may find it advantageous to regulate consumption, speech, and production vastly more than is now expedient.

CHAPTER LVI

CONSTRUCTIVE LIBERALISM

What the liberalist believes. A liberalist in economics is one who believes in the freedom of the individual rather than in compulsion, either by the mass or by a despot. He relies mainly but not exclusively upon individual initiative. He believes that individuals will, without compulsion and under freedom of contract, do whatever is necessary to provide for the needs of the community. He believes that it is not necessary continually to impose upon the individual the authority either of a benevolent despot or of a well-meaning majority. In somewhat extreme cases, such as can be covered by the criminal law, laws for the enforcement of contracts and other obligations, and laws for the standardization of various aspects of business, compulsion is necessary and helpful. He believes that the interests of the public are expressed quite as accurately on the market and through the price lists as through the ballot box and the statute books. He believes even that poverty and most of the social ills can be eliminated under the system of voluntary agreement—freedom to accumulate, to own, and to operate private property—and without subjecting individuals to the necessity of becoming government employees.

Freedom versus compulsion. There are only two ways of getting men to do what is necessary for their own maintenance and that of the public: one is to induce them by the offer of a reward, either of a material or of an immaterial kind; the other is to compel them by authority. For example, an army can be recruited and men led to fight for their country either by the volunteer system or by conscription. The one is the method of freedom; the other is compulsory so far as the individual is concerned, whether the government be despotic or democratic.

In the case of despotism a despot exercises compulsion over the individual; in the case of a democracy it is the mass which exercises the compulsion. On general grounds popular government is very much better than despotism, but so far as the conscripted individual is concerned he has no more choice as to whether he will fight or not in one case than in the other.

Industries may likewise be recruited under the volunteer system or by conscription. Men may be induced to work on the farms and in the factories and mines by the offer of wages, profits, etc. or they may be directed by authority to do so.

If no one were allowed to accumulate capital or to own a farm or a factory or a mine we should have much less freedom to choose our own occupations and to direct ourselves than we have under a system of free private enterprise and voluntary agreement. Even in an army the higher officers are not conscripted, though there is a story of a man who went into hiding, there to remain until the government should begin to draft captains. Under a régime of complete government ownership and operation men would have to be chosen by authority for the higher as well as for the lower positions in the industrial system.

Opposed to socialism. That there would be less freedom under universal government ownership than under private ownership will be clear to anyone who will stop dreaming long enough to think about it. No one could begin farming on his own initiative under that system, but would have to be placed in charge of a farm or told to work under a boss, according as those in authority should decide. Under a liberalistic system anyone who can handle a farm successfully can become a farm manager and ultimately a farm-owner, as thousands have already done. By serving an apprenticeship as a farm hand under a free contract with another free man, if the farm hand is a success he can always, after a few years of experience, become a share renter. Again, by making a contract with another free man, if he can make a success of this he can in a few more years become a cash renter. Again, if he is successful he can become a mortgaged owner and, finally, an unmortgaged owner.

Every stage of this advancement is conditioned upon his making a success of the next lower stage. If he can, according to the philosophy of liberalism it is economical of the human resources, as well as of the farms, that he should be advanced until he finds his level. If he cannot make a success in any one of these stages it is a sign that he has reached or passed his level, that he has risen as far as, or farther than, it is economical that he should rise. It would be a waste of both human and material resources to advance him farther. If, for example, he can succeed as a farm manager it would be wasting a good manager to leave him in the position of a farm hand. In the interests of the community he should advance. But if he would make a poor manager it would be wasting other labor, as well as material equipment, to have them placed under his management. Under the system of free contract each man tends to find the place in the industrial system in which he can best fit. This is the method of trial and error. Each individual tries himself out and does not have to wait for the consent of someone else. Under the system of universal government operation the would-be farmer would have no better chance to test himself, or to advance on his own initiative, than he now has in the army or in the civil service.

The liberalist believes that, in general, the volunteer plan is better than the compulsory one. There are, of course, occasions when compulsion becomes necessary. These are usually occasions of acute and instant necessity, when there is not time for the market to adjust itself and to organize a volunteer system.

In time of war compulsion takes the place of freedom. Socialists are in the habit of saying that in time of war nations turn to socialism. It is true that in time of war compulsion is generally, or at least to a considerable degree, substituted for freedom; but the whole business of war is compulsion. Our dealing with foreign enemies is necessarily on a compulsory rather than on a voluntary and contractual basis, and the whole organization of society may have to be changed from freedom to

compulsion in order to carry on the compulsory business of war.

There are a multitude of minor forms of compulsion besides war itself. Taxation is a compulsory payment of money to the government. Conscription is compulsory military service. Forced loans are compulsory in a high degree. The censorship of the press is merely compulsory regulation of the business of selling talk for private profit. It may be necessary, in order to prosecute a war successfully, to resort to compulsion in recruiting munition factories and even farms. Rationing the population in time of food scarcity may be necessary.

In a régime of universal compulsion some must necessarily be treated better than others. Even though conscription be carried out without personal favor, the result works to the disadvantage of those drawn by conscription as compared with those not drawn. Those on whom the lot falls act as shock absorbers for the rest of the community. There is nothing particularly democratic about this, though it may be the best possible way of meeting a national crisis. Under such conditions, when the life of a nation is at stake, it does not stop for the niceties of social justice. Necessity knows no law. It is probable, however, that as a result of several years of this compulsion there will be so much dissatisfaction and sense of unfairness as to provoke a strong reaction against compulsion and in favor of the volunteer system, not only in the work of fighting but in business and industrial pursuits as well. We may consider ourselves fortunate if this reaction does not carry us too far in the direction of license and impatience with all restraint.

Dangers of freedom. Freedom of trade—freedom to buy and sell, to offer and accept rewards—is a part of the program of liberalism. There are, however, some very serious results which accompany freedom of bargaining. We saw in Chapter L that the advantage in bargaining is always on the side of those who are trying to sell something which is undersupplied or of those who are trying to buy something which is oversupplied. Conversely, the disadvantage is, of course, on the side of those trying to sell something which is oversupplied and of

those trying to buy something which is undersupplied. When there is a long-continued oversupply of certain commodities or of certain kinds of labor, those who are under the disadvantage of trying to sell them feel, naturally enough, that the advantages of free contract are not so very great, since they are playing a losing game. They are frequently willing to take their chances under some form of compulsion, feeling that they could not be much worse off than they are under the system of free contract.

The situation of those trying to sell something that is oversupplied, especially if it happens to be labor, is summarized in the statement that "liberty is frequently the liberty to starve." It must be confessed that liberty is dangerous, even though it is very precious. Severe conditions are imposed on free men. Liberty to be on the street may mean liberty to get run over by an automobile. Liberty to go swimming may mean liberty to drown. Liberty to sail the seas may mean liberty to get shipwrecked. Children who are restrained in their liberty and are forbidden to be on the street are in less danger of being run over, and those who are prevented from going in swimming are in less danger of being drowned. Liberty is a terrible thing, but at the same time it is, for grown men, beyond price. Liberty to buy and sell may mean liberty to become bankrupt. The individual who has a guardian to forbid him to do any bargaining whatsoever may be saved from bankruptcy.

Advantages and disadvantages of freedom of contract. We saw in Chapter L that when farm products are oversupplied, as they were in the early nineties of the last century, the farmer is at a disadvantage in bargaining. When he was compelled to take low prices for his products, in many cases he was impoverished. There are only two possible ways out of such a difficulty: the first way is to restore the equilibrium between the demand and the supply, so that the prices of products shall rise to a remunerative level and the farmer be enabled to bargain advantageously; the second is for the government to exercise its power of compulsion in favor of the farmer and against

those who have the advantage on the market. At other times, as during the World War, the reverse of these conditions is found to exist. The consumer is the one who is at a disadvantage, since he is trying to buy undersupplied goods. Again, there are two ways out: first, to increase the products and restore the equilibrium between the demand and the supply; second, for the government to resort to some sort of compulsion in favor of the consumer and against the farmer or the dealer. The liberalist is one who prefers to restore the equilibrium and then allow the free bargaining process to go on.

In much the same way there has been what seems like a chronic oversupply of the lower grades of unskilled labor. This has made it difficult for the unskilled laborers to secure remunerative wages; that is, wages high enough to support their families in comfort. At the time of the World War there appeared to be a scarcity, or at least there was no longer such an oversupply of labor as formerly. Immigration from Europe had almost ceased, and at the same time the country was trying to expand various lines of production.

In ordinary times, however, for some hundreds of years back, the unskilled laborer has been at a disadvantage. A great many sympathetic people have assumed that there was something inherent in the nature of labor that put the laborer at a disadvantage, and something inherent in the nature of capital that put the capitalist at an advantage in the bargaining process. This is not true, although, as we have seen above, conditions have generally been more favorable for the capitalist than for the unskilled laborer. But whenever and wherever unskilled labor has been hard to find, the advantage has been quite as much on the side of the unskilled laborer and the disadvantage quite as much on the side of the employer. Whenever it has been possible for an employer to hang out his shingle saying "Men Wanted" and have ten men apply for each position, the conditions have been favorable for the employer and unfavorable for the laborer. The fact that there are more men applying for jobs than there are jobs to be had is a sure indication

of an oversupply of labor. The case is parallel to that which would exist if a buyer of wheat could hang out a sign "Wheat Wanted" and have many times more wheat offered than he could buy. That would be a sure indication of the oversupply of wheat. On the other hand, if a farmer should put up a sign which read "Wheat for Sale" and find that many more buyers than he could supply were coming to purchase wheat, that fact would indicate an undersupply of wheat. Similarly, if a laborer, by putting out a sign "Job Wanted" should have several employers coming after him, this fact would indicate an undersupply of labor.

Making the advantages even on the two sides. The policy of the constructive liberalist is indicated by these observations. It is his opinion that conditions can be created under which the average employer will find it as hard to get a man to work for him at liberal wages as the man will find it to get an employer to hire him at those wages. When that is accomplished the advantages in bargaining will be about even. Labor will no longer be under a handicap in the bargaining process. Laborers will no longer feel the need of some compulsory restriction upon bargaining, but will feel quite able to take care of themselves without help from the government or any other compulsory agency.

A program looking in this direction may take a little longer to work out, but from the point of view of the constructive liberalist the results once achieved are vastly preferable to any achieved under a compulsory system. There is an old story about a wagoner one of whose wagon wheels got into a deep rut. Instead of trying to extricate it he sat down by the side of the road and called upon Hercules to aid him. The story goes that Hercules replied that if the man would put his shoulder to the wheel he could get out of the difficulty without calling on outside help. This, according to the liberalist, represents a general tendency in human nature. The government is our Hercules, and whenever we get into difficulties we are in the habit of sitting down and crying vociferously for the

government to come and do something. Even though we have only the vaguest ideas as to what the government could do, we still insist that it do something or other. To be sure, there are some things which only the government can do. No other agency than the government can be intrusted with any kind of compulsion; and if compulsion is necessary, of course we must then call upon the government. To paraphrase an old remark, the individual's extremity is the government's opportunity.

"Doing something" for people. Beneficence is, of course, a characteristic of good government; but many of us, according to the liberalist, have never reached the point where we can understand that a "beneficent letting alone" is sometimes the most beneficent thing the government can give us. There are many people who feel that when they are ill the doctor must "do something." They do not realize that sometimes the most beneficent thing the doctor can do is to do nothing. A doctor whose desire is to please his patients may feel under some compulsion to do something for them, even if it is nothing more than to give them bread pills. From the standpoint of the liberalist much of our so-called social legislation consists of bread pills.

Sometimes, however, it is really necessary that the doctor should do something. The doctor whose skill consists in his ability to cure sickness rather than to please patients will have enough to do, provided the people know enough to appreciate him. The same may be said of a government. There are a few really vital things that a government may do. If it succeeds in doing these few things well, it will then be unnecessary to do the thousand and one trivial things that it is asked to do.

Restriction of immigration. So far as this country is concerned, probably the most far-reaching and constructive piece of legislation in the last generation has been the restriction of immigration. This is one of the few acts of the government which go directly to the root of the difficulty of low wages and poverty. It is an act which definitely aims at reducing the oversupply of unskilled labor. It is true that it does not go far in this direc-

tion, but at least it indicates to the public that the government has recognized the source of the difficulty and is no longer proceeding on general guesswork in an attempt to overcome it. If it will go a little farther in the same direction it will make unskilled labor so scarce and hard to find that the unskilled laborer will no longer be at a disadvantage, but can bargain on even terms with employers and secure living wages for himself without help from anybody.

Wherever any particular class of labor is, for a considerable period, scarce and hard to find, there the conditions of labor are good for that class, and it needs no social legislation for its protection; but wherever any particular class of labor is abundant and easy to find, there the conditions of that class of labor are bad except where mitigated by the kindliness of individual employers or by various kinds of social legislation, most of which are ineffective.

So long as labor is oversupplied and laborers are unable to get good jobs the term "wage slavery," while inaccurate and intended to mislead, will continue to convey a meaning to the laboring man and will be an effective means of misleading him. Where labor is scarce and hard to find no one can use that term with a straight face. So long as the former conditions prevail, there will be a widespread feeling—and this feeling will be justified—that the laborer is in a helpless situation, so far as economic laws are concerned, and that his only hope is in numbers and brute strength. When this feeling is widespread, laboring men will be excused, and public opinion may justify them, in the use of violence. There will be no effective public opinion to support the state in its efforts to preserve law and order. When there is some approach to the latter conditions, there will be an easy recognition of the fact that the laborers are not in a helpless condition and that they do not need to rely on numbers and brute strength, and public opinion will then support the state effectively and promptly in its maintenance of law and order.

While it may not be possible or desirable to reach such extreme scarcity of laborers and abundance of employers as described under the last-named condition, it is both possible and desirable to make some progress toward that condition and away from the first-named condition. We can train a few more men to become employers—creators of business enterprises—and thus increase somewhat the number of jobs for laboring men. This will do our present laboring population little good if the new jobs are promptly filled by immigrants. There must also be a restriction of immigration.

Results of importation of capitalists and employers. If immigrants entered the class of employers in the same proportion as do the native born they would not materially disturb the balance. If they generally entered the ranks of employers rather than employees they would disturb the balance to the advantage of laborers and to the disadvantage of employers. But they enter the laboring class almost exclusively and the class of unskilled laborers predominantly. If they were excluded (which is not here proposed) our free education and liberal institutions would encourage those now here to rise rapidly out of the class of unskilled laborers into the better-paid occupations,—better paid because men are scarce who are fitted to fill them. This would soon make unskilled labor, and ultimately all poorly paid labor, so scarce and hard to find as to put all laborers in a strong position economically and make it unnecessary for them to resort to numbers and brute strength. Moreover, employers would have to offer satisfactory inducements to persuade laborers to work for them, and very little social legislation for the alleged protection of the laborers would then be necessary.

Selecting immigrants. Better than exclusion would be a plan of restriction which would select those who were capable of entering the well-paid occupations and exclude those who would crowd into occupations where wages are already too low. The best way to do this would be to reverse our present contract-

labor law and admit only such immigrants as could present contracts, signed by responsible employers, guaranteeing employment at five dollars a day for at least a year. (It is not necessary that the wage should be exactly five dollars. That figure is named because it is about the minimum on which a family can be supported in comfort and decency in any large city in this country. It is essential that there be some minimum wage attached to these contracts.) This would admit all the laborers who were really needed. No employer can say, with a straight face, that he needs men so very badly unless he is willing to pay them as much as five dollars a day. At the same time it would prevent the coming of hordes of cheap laborers whose influence is to depress the wages of unskilled labor. It would make the lower grades of labor so scarce as to eventually make five dollars a day the actual minimum wage without the difficulty of enforcing a minimum-wage law. This would automatically take care, also, of the distribution of our immigrants, because they would go only to those places where they were badly needed. This would be very much better than any immigration commission could distribute them, besides saving for useful work the man-power that would be wasted upon the commission.

The literacy test as a means of selecting immigrants is vastly better than no test at all. This is said with a full recognition of the fact that literacy is not an invariable test of character. Neither is it an invariable test of fitness for the civil service nor for entrance to college. It is believed, however, that if all literate immigrants are arranged in one group and all illiterates in another, the *average* of the literates would be above that of the illiterates. Excluding illiterates would therefore improve the average quality of our immigrants.

Again, the illiterates go predominantly into the unskilled trades where wages are low. The exclusion of illiterates therefore tends to make unskilled labor scarce, while the admission of literates would permit us to get all the skilled labor we need;

that is, to increase our supply of any kind of labor which can in any sense be said to be scarce.

It will be observed that nothing has been said in the above statement about race, religion, eugenics, or anything of the kind. The reasons given in favor of the restriction of immigration are purely economic. They relate wholly to the problem of improving the conditions of the lower grades of labor. The time is probably coming when anyone's protestations of interest in the cause of labor or of social welfare will be laughed out of court unless he is willing to do the one thing which will really help labor; that is, make it scarce and hard to find, or jobs abundant and easy to find, which comes to the same thing.

Restriction essential. Whatever immigration policy is adopted we must not lose sight of the fact that the essential thing is to restrict. Unless the number of unskilled laborers is materially reduced, the immigration policy will do nothing for labor. If the number of unskilled laborers is materially reduced, it will tend to make unskilled labor scarce and hard to find. Our democratic institutions, under which every human being is encouraged to rise in the economic scale, and our system of popular education, which makes it easy for the rising generation to avoid the unskilled and poorly paid and to enter the skilled and highly paid occupations, will combine to thin out the unskilled laborers. These democratic institutions, however, will not relieve the oversupply of unskilled labor if we continue to import it in unlimited quantities. Any kind of restriction, therefore, is better than no restriction. In addition to the literacy test, any other test which will actually reduce the numbers imported and permit us to select the more desirable applicants is a good proposal, though some may be better than others.

Highly productive industries can flourish on dear labor. It may be objected, however, that without cheap labor some of our industries could not flourish. That may be true. We have to consider, however, whether an industry is worth preserving

that is in itself so unproductive or is of such low productivity as to require cheap labor for its survival. The author's opinion is that the country would be better off without such industries. We should still have industries that were productive enough to stand high wages. It would be a better country if it were supported exclusively by such industries than it will be if the ground is cumbered by such barren fig trees as industries that can flourish only on cheap labor.

Some general shifting about and readjustment would undoubtedly be necessary. Some indispensable operations now performed by cheap labor would still have to be performed, but if the work is indispensable we should simply pay high wages to get it done. Most of such operations, however, would eventually be done by machinery. So long as it is cheaper to have them done by hand than by machinery they will be done by hand. When it becomes more expensive to have them done by hand than by machinery they will be done by machinery. They who fear that certain indispensable operations cannot be done at all if we do not have cheap labor apparently have very little faith in their own inventiveness or in that of their fellow countrymen.

The author is fully aware that it is money in the pockets of the business and professional classes to have immigrant laborers come in large numbers. Numerous immigrant laborers mean an abundant supply of cheap labor. An abundant supply of cheap labor means reduced cost of production. Reduced cost of production means either increased profits or else lower prices. If it means increased profits, that means larger incomes for the employers. If it means reduced prices, that means that the incomes of those who do not have to compete with the immigrants will purchase more, but it also means that the incomes of those who do have to compete with the immigrants will be reduced by that competition and will purchase less. In short, those who do not compete with the immigrants get a larger share and those who do have to compete with them will get a smaller share of the total products of all our industries when

we import vast numbers of cheap laborers. Immigration of laborers rather than of employers is, in other words, a means of increasing the inequality between laborers and employers.

Dangers of an oversupply of cheap labor. Even from the point of view of the employing classes it is a penny-wise and pound-foolish policy to favor unrestricted immigration. When laborers are many they are, it is true, in a weak position in bargaining. As pointed out in Chapter L, on the market numbers count against them. But, conversely, they are in a strong position in voting and fighting. Here numbers count in their favor. The employing class is hereby warned to beware of the day when 51 per cent of our voting and fighting population is in the position of poorly paid wageworkers, who, because of their low wages, have very little chance of ever rising out of that class. When that happens they will take charge of your industries by force. It is quite true, of course, that they would injure themselves in so doing, but men frequently do things through class hatred that injure them. Unrestricted immigration tends to increase the number of such poorly paid wageworkers and might easily carry it beyond the danger point.

A low standard of living and a high birth rate. But immigration from Europe and Asia is not the only source of oversupply of unskilled labor. The inordinately high birth rate among the ignorant and unskilled is another large source of cheap labor. Nothing, apparently, but a rise in the standard of living will reduce the volume of this stream. A rise in the standard of living means an increase in the number of things which the average man or woman thinks necessary to the support of the family. The more things they feel they must have before they can marry and support a family, the longer they will postpone marriage. The longer they put off marrying, the smaller the number of children there will be in the family, partly, at least, because the childbearing period of the wife is reduced. If the age of marriage is raised on the average from eighteen to twenty-three, there are five less years during which the wife may bear children.

Families too small among the educated classes. The restriction of immigration among the ignorant and unskilled, of course, has nothing to do with the restriction of immigration among the educated and skilled. The latter are as free to come as when immigration was unrestricted. Similarly, a rise in the standard of living among the ignorant and unskilled has nothing to do with the marriage and the birth rate among the educated and skilled. Among the latter classes the reform ought to proceed in quite the opposite direction. There is no doubt that among these people marriages are postponed too long and the average families are too small.

Increasing the supply of employers. The decrease in the number of people born with the heredity and prospective training which fit them for skilled positions and for positions in the ranks of the employing class tends to reduce the demand for unskilled labor. Hitherto unskilled laborers have suffered from two causes: the fact that there have been too many unskilled laborers and the fact that there have been too few employers. It is as though in the badly balanced ration of an individual or an animal the too abundant ingredient (say, starch) were to be increased more and more and the too scarce ingredient (say, protein) were to be decreased more and more. The combined result of increasing the one and decreasing the other would produce a more and more unbalanced ration, to the detriment of the man or the animal. The continuous increases in the ranks of the unskilled laborer through immigration and the high birth rate, and the decrease in the highly skilled and managerial labor through the postponement of marriage and various other causes, have produced a progressively unbalanced population, tending to make unskilled labor very cheap and highly skilled and managerial talent very dear.

Fortunately, the effect of this combination of processes has been offset, at least partially, by our system of popular education. Such a system of universal and popular education has the effect of redistributing talent, of taking young people who would otherwise have remained in the ranks of the unskilled

and training them for the ranks of the skilled, the managerial, and the entrepreneur class. This tends to reduce the supply of ignorant laborers and increase the supply of educated workers. If the system of popular education continues to improve, if greater and greater restrictions are placed upon the importation of unskilled labor and a higher standard of living is acquired by our own unskilled laborers, the combined results of these three changes will tend to make unskilled labor scarce and hard to find and to make jobs abundant and easy to find, thus giving the unskilled laborer the advantage not only of retaining his liberty of contract but of prospering under it. If we carry out our educational policy to its logical limit and train not only skilled laborers but also managers and employers, and at the same time create a more rational standard of living and better moral conditions among these classes, the combined results of these two policies (that is, training men for the high positions and encouraging larger families among them) will so increase the numbers of the managerial class as to take away their present advantage in the bargaining process. By following this general process throughout all ranks of society we may expect in a short time so to even up the advantages of bargaining as to give us something approximating equality without substituting compulsion for freedom.

Thrift and the laborer. The encouragement of thrift will tend in the same direction and will accelerate the process of putting unskilled labor in a position to prosper under freedom. It is through thrift that capital accumulates. When capital becomes so abundant that the average owner of capital has great difficulty in finding an opportunity to use it, he will have to be content with a smaller share in the products of industry.

The encouragement of productive enterprise, the frank acknowledgment of our obligation to the man who shows the ability to plan a new enterprise and, what is vastly more important, to make it actually succeed, will do a great deal to expand the opportunities for those of us who do not possess that kind of ability. The more such men we can develop in our midst,

the more our industries will expand and the more opportunities for remunerative employment there will be for the rest of us.

Poverty easily curable under freedom. We need not have poverty in our midst a generation longer than we want it. By setting to work deliberately to balance up our population, making ignorance and lack of skill to disappear, and making technical training and constructive talent to increase, we can, in a short space of time, make low wages and poverty a thing of the past. What is even better, we can do this and still leave everyone a free man. This is the gospel of the new, or constructive, liberalism which is destined to bring relief—if not to this nation, at least to some nation which has the wisdom to adopt it—and which, when adopted, will keep that nation in the position of leadership among all the nations of the earth.

A LIBERALIST'S PROGRAM FOR THE COMPLETE ABOLITION OF POVERTY[1]

I. Legislative Program

A. For the redistribution of unearned wealth
  1. By increased taxation of land values
  2. By a graduated inheritance tax
  3. By control of monopoly prices

B. For the redistribution of human talent
  1. By increasing the supply of the higher, or scarcer, forms of talent
    (*a*) By vocational education, especially for the training of business men
    (*b*) By cutting off incomes which support capable men in idleness
  2. By decreasing the supply of the lower, or more abundant, forms of labor power
    (*a*) By the restriction of immigration
    (*b*) By the restriction of marriage
      (1) By the elimination of defectives
      (2) By the requirement of a minimum standard income
    (*c*) By a minimum-wage law
    (*d*) By fixing building standards for dwellings

[1] Compare the author's work entitled "Essays in Social Justice," chap. xiv. Harvard University Press, 1915.

C. For the increase of material equipment
  1. By increasing the available supply of land through reclamation
    (*a*) Of "cut-over" land
    (*b*) Of stony land
    (*c*) Of swamp land
    (*d*) Of arid land

II. Nonlegislative Program

A. For raising the standard of living among the laboring classes
  1. The educator as the rationalizer of standards
  2. Thrift and the standard of living
  3. Industrial coöperation as a means of business and social education

B. For creating sound public opinion and moral standards among the capable; for example:
  1. The ambition of the family-builder
  2. The idea that leisure is disgraceful
  3. The idea that the productive life is the religious and moral life
  4. The idea that wealth is tools rather than a means of gratification
  5. The idea that the possession of wealth confers no license for luxury or leisure
  6. The idea that government is a means, not an end
  7. Professional standards among business men

C. For discouraging vicious and demoralizing developments of public opinion; for example:
  1. The cult of incompetence and self-pity
  2. The gospel of covetousness or the jealousy of success
  3. The idea that the capitalization of verbosity is constructive business

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